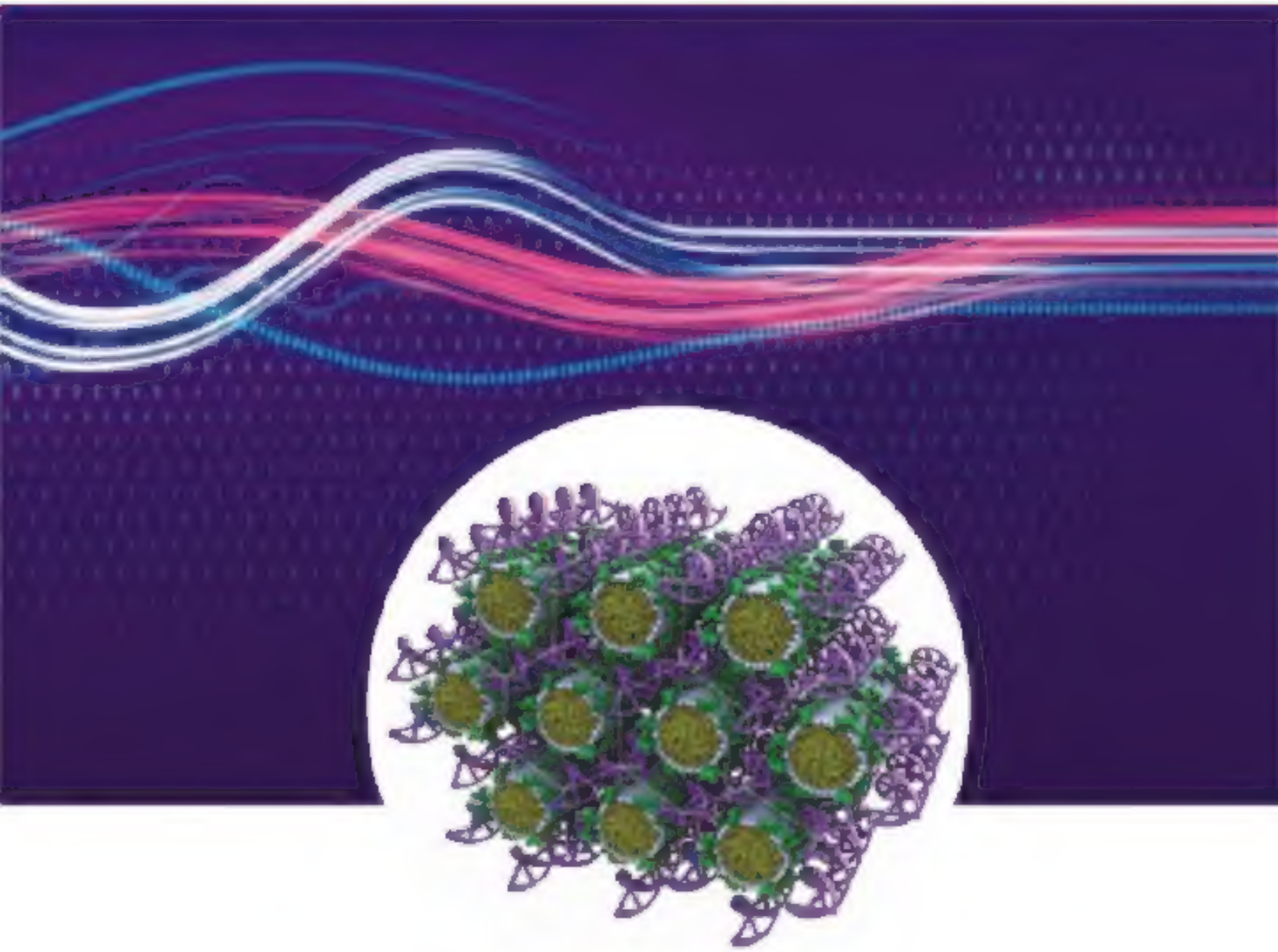
BJKines

To Educate, Inform and Promote

Volume 1 No.1 June 2009



Official Publication of B. J. Medical College,
Civil Hospital, Ahmedabad and affiliated Institutions

(Health & Family Welfare Department, Government of Gujarat)


Learning at B.J. Medical College & Civil Hospital
One of the oldest and biggest in Asia
Experienced faculty
Course work
Extra curricular activities
Largest resource of Bio-medical Literature
Affiliation to super-specialty research hospitals
Exposure to trends and development
Abundant clinical material

BJKines

Official Publication of B. J. Medical College,
Civil Hospital, Ahmedabad and affiliated institutions

Editorial Board

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-: MESSAGE :-

An in-house magazine, generally, apart from being informative, also highlights the high spirits and achievements of the concerned institution/ organization. It also offers endless opportunities for inmates to contribute effectively in all spheres.

It gives me immense pleasure to note that **'B. J. Medical College'** is launching a magazine that will envelope the college as well as the affiliated institutions. I extend my warm wishes and greetings to this new interactive organ. I am sure the college will boldly rise to the challenges and achieve glory for the country.

I also take this opportunity to compliment the editorial team and students who have worked hard for the edition of this magazine.

(NARENDRA MODI)

To,
The Dean,
B.J. Medical College,
Civil Hospital Campus,
Ahmedabad – 380 016.

Narendra Modi
Chief Minister, Gujarat State

DR. KETAN DESAI
PRESIDENT
Medical Council of India
New Delhi

-: MESSAGE :-

I am happy to know that B. J. Medical College, Ahmedabad has decided to publish a magazine cum news bulletin of B. J. Medical College and Civil Hospital affiliated institutions within the campus.

B.J. Medical College, Ahmedabad is an institution providing higher education in modern medicine and their vast contribution to country and abroad.

On this occasion, being a part of the institution, I extend my warm greetings and felicitations to all associated with this for success.

(Dr. Ketan Desai)

To,
Dr. Bharat Shah
Dean
B.J.Medical College
Ahmedabad.

Jay Narayan Vyas

No.MIN/HFW/THP/DPD/NGO/NRG/
Minister
Health & Family Welfare, Tourism, Devsthan, Pilgrimage Development, NGOs, NRG

Government of Gujarat
1/8, Sardar Patel Bhavan
Gandhinagar 382010, Gujarat, India
Phone: 079-23238109, 23243502 (O) Fax: 23250135
Email: min-health@gujarat.gov.in

-: MESSAGE :-

I am happy to learn that the BJ Medical College, Ahmedabad has decided to publish a Magazine-cum-News Bulletin covering the important activities at the civil hospital as well as medical college. I am sure this publication would serve as a well useful platform for sharing the information and experience through highlighting important case histories dealt with by our experts in the present era of knowledge driven management. I am confident the publication will also provide the immense opportunity for documenting the case studies and research for the larger benefit of the medical fraternity. I hope the quality and coverage of the content will be so maintained that the publication energize to be one of the most sought after reference journal through the shear quality of its content and coverage. Coming as it does from one of the oldest medical colleges in the state, it must provide a model for similar other colleges and hospitals in the state and outside. This is not going to be an easy task. However, I am confident that we have the necessary expertise and capabilities to surpass the best of the expectations. While the maiden issue is wholeheartedly welcomed, please accept my good wishes for it to become a trend setter in the years to come.

Gandhinagar
15.05.09

Jay Narayan Vyas

PARBATBHAI PATEL

MOS.W.S.CO.A.H.F.W/2576/2008.
Minister of State for Water Supply,
Co-Operation, Health & Family Welfare
Block No. 2, 4th floor, Sardar Patel Bhavan,
Gandhinagar-382010
Phone:(079)-23250141, 23250144
Fax:(079)-23250142
Date :- 19 MAY 2009

-: MESSAGE :-

I am glad to know that B.J.Medical Collage,Ahmedabad is going to published a **Magazine cum News Bulletin** of B.J.Medical Collage, and Civil Hospital affiliated Institutions within the campus.

I appreciate the efforts to published such a valuable Magazine cum News Bulletin of B.J.Medical Collage & Civil Hospital, Ahmedabad, one of the largest Medical Institution in Asia.

I am pleased to know that the Magazine cum News Bulletin will include various informations on special facilities and services provided by the Hospital, Important Research articles, Interesting clinical cases, Training programmes, attractive workshops, Achivments and Activities of staff and Students and details of Scientific events related to the Hospital, Collage and Institutions within the campus.

I am sure that the active reading and proper use of the Magazine will make the Magazine fruitful, Which will be usefull for Doctors, Staff, Students & Patients in long way.

I wish the Magazine a grand success.

With best regards...

(PARBATBHAI PATEL)

To,
The Dean,
B.J.Medical Collage, Civil Hospital Campus,
Asarva,Ahmedabad-380016.

Ravi S. Saxena, IAS
Principal Secretary

Government of Gujarat

Health and Family Welfare Department
Block 7, 7th Floor, Sardar Patel Bhavan
New Sachivalaya, Gandhinagar - 382 010

-: MESSAGE :-

I am very happy to know that B.J.Medical College, Ahmedabad is to publish a magazine cum news bulletin of B.J.Medical College and Civil Hospital affiliated institutions. I am sure that the magazine will disseminate very useful information on the activities and endeavours of the faculty, research scholars and students of the institute. I do hope that this journal will give adequate circulation of the research papers being brought out by the members of this institute. This journal is also expected to fill the long felt need for a common platform for sharing information regarding seminars, workshops, training programmes and other events held in the institute. I do hope that this journal will fulfil a long felt need of the Ayurved fraternity and will play a larger and larger role in future.

On this occasion, I wish to congratulate all the people involved in this venture and convey my best wishes for the success of the magazine.

(Ravi S. Saxena

From The Chairman's Desk.....

Dr. Bharat J. Shah
Dean,
B. J. Medical College, Ahmedabad.

Dear colleagues and friends,

It gives me immense pleasure to write for this inaugural issue of our magazine. This magazine will certainly provide a communication channel amongst all medical fraternity.

Our Honorable Chief Minister Shri Narendra Modi has been very supportive for the complete renovation of B. J. Medical College & Civil Hospital complex. The different institutions of Civil Hospital complex will be well equipped with modern day requirements. We are very thankful for his kind support.

Dr. Ketan Desai has been elected as President of Medical Council of India for the second time. On behalf of all, I congratulate him and look forward to his leadership, guidance & support in our manifold activities.

At B. J. Medical College, lecture halls are modernized and made user friendly. All heads of departments are provided laptops. Library is air conditioned with the help of our alumni association and e-journals are available. Post graduation facilities for Biochemistry and Emergency Medicine will start very soon. Administrative office will be computerized. Canteen and auditorium will also be modernized very soon. Our laboratories will be accredited by NABL.

"Deh Dan" Donation of dead body to the Anatomy Department has been a very good tradition of Gujarat. This year our Anatomy Department received a record number of dead bodies. Our students excelled in all the fields and 50 students could pass PMT with flying colours. Our team provided all round support during the difficult time of bomb blast in Civil Hospital complex on 26th July 2008. It has been really a time with all round action. I wish B. J. Medical College and all other institutions to achieve greater heights in coming days.

Bharat J Shah

Dr. Bharat J.Shah

From The Editor's Desk.....

It gives us great pleasure to put forward the first issue of ***BJKines***. An institution of such a magnitude must have a premier print publication for the esteemed staff members, alumni and friends. This has been made possible with active interest and support of our Hon'able Health Minister Shri JayNarayan Vyas, Principal Secretary Shri Ravi Saxsena, Additional Director of Health, Medical Education & Medical Services Dr. P. D. Vithalani and Dean Dr. B. J. Shah.

The magazine will be published quarterly with features of science, academics and news. The objective of this magazine is to provide platform for our esteemed staff members to publish their scientific research work, share and strengthen the connections with readers. It is in this spirit the theme of our magazine is ***'To Educate, Inform and Promote'***. The name of the magazine has been adopted from the term *'Cytokines'(cyto-cell, kines-movement)*, signaling molecules used extensively in cellular communications in health and disease process. Thus the word ***BJKines*** encompasses the academic, research and extracurricular activities at all the institutions within the campus.

In addition to scientific research articles and interesting clinical cases, the magazine will also publish scientific events organized by department, publications and achievements of staff members, research projects undertaken by the department and student's achievement. The members are requested to submit the manuscript and relevant information as per instructions to contributors. The initial response has been overwhelming. However, we need to sustain this enthusiasm by the active involvement of all the members. We look forward for your views, opinions and support to make ***BJKines*** interactive and vibrant. Articles of humour, cartoon, quiz, crossword puzzle etc. are welcome.

We thank the editorial board for having confidence in us and assigning the responsibility of the editorial work. We assure to fulfill the task with sincerity and commitment.

Dr. Mira K. Desai

Dr. Bipin K. Amin

BJKines

Contents

B. J. Medical College & Civil Hospital Ahmedabad : A Profile

B. J. Medical College, Ahmedabad, is one of the oldest largest and advanced premier medical institutions of the country giving admission to 250 students every year. The institute has been ranked in the top ten best medical college of India (*The Week*, November 2008). It is a matter of pride and privilege on the part of the student to study in such an institution of international repute. It is one of the largest sources of medical manpower in the country. Each year a new batch of doctors is churned out well equipped to shoulder the responsibility of health care of the masses. A large number of college students, now serving in the USA have organized *B.J. Medical College Alumni Association*. The association has made significant contribution in the up gradation and modernization of the institute. The institute also offers postgraduate courses in 19 branches of medicine, 5 branches of surgery, 10 branches of diploma and 7 branches in super specialty. It is also recognized center for DNB in different specialties and various courses under IGNOU. It is affiliated to the Gujarat University since 1951 for under graduation and in 1956 for post graduation.

The Glorious History of B. J. Medical College, Ahmedabad

B.J. Medical College was started in 1871 as the Ahmedabad Medical School. It had humble beginning with intake of 14 students who pursued for Hospital Assistant training. In 1879 it was renamed after the late Hon. Byramjee Jeejeebhoy who donated Rs. 20,000/- to erect the magnificent building and was attached to the Civil Hospital at Gheekanta road. The school grew and became affiliated with the College of Physicians and Surgeons of Bombay in 1907. By 1946, the school obtained affiliation with Bombay University and then achieved higher status for itself to become B.J. Medical College, providing diplomas for L.C.P.S. In 1961, the Gujarat University took over the school which today flourishes with other allied medical and paramedical institutions including M&J Institute of Ophthalmology, M.P. Shah Cancer Research Institute, TB Demonstration and Training Center, Institute of Kidney Diseases and Research Center, Institute of Cardiology and many other special laboratories and medical facilities.

The College Symbol

It is divided equally into four quadrants. Above and below of these quadrants are Sanskrit and Latin phrases respectively with same meaning of the symbol.

The two opposing corners represent thirteen canons of the International Medical Ethics. In the top left and bottom right corners are the Cock of Gujarat and Serpent intertwined on a dragger of the Aesculapius respectively. The cock as a sign on the imperial banner of Gujarat appeared on the time of Bhimdev, the first Siddharaj Jaysinh raised that banner high and the mighty flag of Gujarat was called as Aesculapius (God of Medicine). The patients from different parts came to the temple of Aesculapius for the treatment which now may be equated with naturopathy. The intertwined serpent on the dagger of the temple goddess has since been symbolized western medicine. The symbol means "*Shall Find A Way, If Not Make One*".

Education approach

The institute emphasizes on an all around development of students. Adequate emphasis is placed on cultivating values and ethical basis of thoughts, clarity of expression, independence of judgment, ability to collect and analyze information to put in right perspective. The fresh undergraduate students have special orientation and counseling programme and aprons are distributed in *'White coat ceremony.'* In addition, free text books are offered to needy students. The meritorious students are appreciated and awarded by medals. A regular MCQ test has been arranged for all UG subjects and interns. The facility for conducting MCQ test for interns has been upgraded by setting up a Computerized MCQ Lab with a question bank of 15,000. All the lecture theatres have been fully equipped with latest audio visual facility. All the departments have been given computers, printers and

aptop for teaching and administration. The Examination Hall and College Auditorium is under the process of renovation. The college library is the largest source of biomedical literature in Gujarat state with latest facility of e journals.

The institution has more than 350 experienced faculty members. The medical teachers participate as resource persons in National & International conferences, workshops and training programme. The members also actively contribute in research activity and are on the editorial board of scientific journals. The institute also undertakes Blood donation, Eye donation, Cleanliness drive "swachhata abhiyan", Tree plantation and Red ribbon club programme.

Civil Hospital

The Hathesing and Premabhai Civil Hospital, publicly known as 'New Civil Hospital' is a pilgrimage for ailments where more than 12 lakh patients are treated annually. The hospital caters to all strata of the society and offers all types of ultra modern health care services round the clock to the poor at nominal cost. It is one of the biggest, oldest and modern hospitals in the country with various specialities in its campus. It offer multispecialty treatment under one roof. Excellent treatment offered at nominal cost has attracted the patients from Gujarat as well as other parts of the country.

The Glorious History of Civil Hospital, Ahmedabad (CHA)

It was mainly founded as ternary care hospital in 1841 with a motive to help poor. Three donors had donated Rs 88,000 to the hospital. It started functioning as first PUBLIC HOSPITAL in 1846 in the name of Hathesing and Premabhai Civil Hospital at the old collector office, GheeKanta. There were only 80 beds and it was run by 12 doctors, 60 nurses and other paramedical staff. Sheth Shree Hathesing Kesarising donated Rs 50,000/- Nagar Sheth Shree Premabhai Hemabhai donated Rs. 20,000/- while Surgeon General D. Wylie donated Rs. 8,000/- An English lady Miss Mary Lambert had contributed and also collected donations from England for the operation theatre. Khan Bahadoor Nowroji Pestonji Vakil had also contributed for the establishment of Opathalmic ward, Parsi ward, European ward and maternity ward.

As the requirements increased, efforts were initiated to construct a new building for the hospital. A huge land was allocated in Jahangirpura Asarwa area and construction started in the 110 acres of land. A newly constructed main building was commissioned in 1953 under the supervision of Dr. C. B. Muller, the first Civil Surgeon.

The present four storied building has 8 blocks from O to G consisting 39 wards. There are general wards, special rooms, operation theaters, post-operative wards, Emergency wards, CT - MR Imaging Centre etc.

Health Care Facilities

Treatment of all specialities like Medicine, Surgery, Pediatrics, Gynecology, Urology, Cardiothoracic, Plastic surgery, Neurosurgery, Gastroenterology, ENT, Ophthalmology, Orthopedics, etc are offered. Ayurvedic and Homeopathy treatments are also offered.

During the last five years, several latest health care facilities have been added with Hi Tech equipments. These include the MRI Centre, CT Scan, Neurosurgical and surgical operative wards, Neonatal ward, renovated gynecology ward, incinerator plant, renovated Casualty Ward, Tribal ward, Blood Bank and Tissue Bank etc. A project for the renovation of building and up gradation of the health care services in a phase wise manner has been initiated by the Government of Gujarat.

A well equipped and functional Trauma Center has been set up having 5 operations theaters and 70 beds in four wards. These rooms have Hi Tech equipments including ventilator machines in the ICU with 11 beds to cater to the critical patients. The center provides all type of life saving treatment and surgeries under one roof for severely injured patients, particularly in natural or man made calamities. The Blood Bank of C.H.A. is a model bank of the state having all types of modern equipments and facilities. It was upgraded with the financial assistance from the European Commission and the state government. The First ART Center has been set up for

HIV positive patients in the state at this hospital. It offers treatments to the affected patients free of cost. Over 7 thousand patients have benefited in the last year at this centre. A Tissue Bank has also been set up in the hospital to sterilise and store the tissues like bone and skin from live or post-mortem donors.

National Accreditation Board For Hospitals And Health Care Providers(NABH):

Department of Health and Family Welfare, Government of Gujarat and Quality Council of India, New Delhi signed a MoU for providing consultancy services for total quality management system and seeking Accreditation for teaching hospitals. Gujarat is the first state in the whole of Asia to bring its public hospitals under NABH standards. Civil Hospital, Ahmedabad is one of the teaching hospitals which is going for the NABH Accreditation.

Important academic activities at CHA

A number of research projects and clinical trials are conducted at CHA at a regular basis as per the Good Clinical Practice guidelines. The Rapid Response Team comprising doctors and support staff provide valuable services in times of medical emergencies like hepatitis, Bird Flu, Influenza Flu etc. Various types of community services like Immunisation Programmes, School Health Programmes, reconstructive surgeries for cleft lip and cleft palate, Non Scalpel Vasectomy camps, corrective surgeries for leprosy affected patients, MNC programmes are carried out at the hospital. The staff of the hospital is regularly trained in biomedical waste management, Infection control, Basic and Advanced Cardiac Life Support, Emergency Care etc. Thus they are well equipped and trained in any natural and manmade calamities.

GUJARAT CANCER & RESEARCH INSTITUTE

(M.P. Shah Cancer Hospital)

REGIONAL CANCER CENTRE

Civil Hospital Campus, Asarwa, AHMEDABAD 380 016, GUJARAT

Phone 079-22688000 (Hunting) Fax No 079-22685490

Email gcriad.ahd@gmail.com <mailto:gcriad1@gmail.com> Website www.cancerindia.org

Special facilities and Services provided by the hospital

The Centre aims to provide state-of-the-art diagnostic and therapeutic services to the patients of all types of organ and financial background suffering from cancer. Its scope also encompasses registering the tumor burden in the population, prevention through awareness drives, solving local medical problems through research and training of medical students as well as imparting knowledge to the medical fraternity.

- Conducts OPD and indoor activities for diagnosis, staging, treatment and monitoring disease progress
- Renders free or subsidized treatment to needy patients without any distinction of caste, creed or religion
- Provides training to new generation of doctors as well as practicing fraternity
- Offers unique experimental and research oriented diagnosis and treatment services to test new forms of diagnosis and therapy in order to improve quality of life and expected survival of those afflicted with cancer
- Organizes public education programmes like diagnostic and blood donation camps, conferences and other scientific meets
- Displays a permanent Cancer Awareness and Anti-tobacco exhibition and arranges other preventive efforts
- Runs a destruction based Hospice Centre, Home-Hospice Services and Rehabilitation Service

U. N. Mehta Institute of Cardiology & Research Centre- A Profile

Dr R K Patel
Director
U N. Mehta Institute of Cardiology & Research Centre, Ahmedabad

BJ Medical College has produced a number of stalwarts and luminaries in the field of Medical service and education as well. We all of us are proud to be a Byte

I am a director of UN Mehta Institute of Cardiology & Research Centre (UNMICRC) Ahmedabad

The Institute is attached with B J Medical College for Super specialty Cardiac Teaching Courses. Till date UNMICRC has given 26 Cardiologists, graduated from this Institute, who are serving as Cardiologists, either in the Institute, in the State of Gujarat, or in India.

UNMICRC is functioning since 1998 in the Campus of Civil Hospital, just adjoining BJMC. UNMICRC is a Teaching, Research, Academic and Charitable Emergency related Cardiac Institute. The Institute is having super specialty teaching courses in Cardiology and Cardio Vascular Thoracic surgery. UNMICRC possesses a state of the art Infrastructure facility in form of Equipments required for Quality Care with Accountability.

At the moment, Institute is having a capacity of 200 beds which is going to be 150 bedded Cardiac institute, after expansion and upgradation in short time. After expansion the Institute will be the biggest in capacity as Heart Institute in India

The Institute runs a unique Free school Health Cardiac Program, which is the first and only of its kind, by Govt. of Gujarat in the country, where free cardiac treatment is given to the children of Gujarat State from age group of 0 to 14 years whether school going (Private and Govt. School) or non school going and 14 to 18 years of School going children of the State

Free Cardiac treatment including procedure, Coronary surgery to Below Poverty Line (BPL) patients of Gujarat State, also to Scheduled Castes and Scheduled Tribes patients of Gujarat State

To add feather in the cap of UNMICRC, the Institute gives Emergency Medical Cardiac Treatment to any patient for initial 12 hours to include First Golden Hour of Cardiac Treatment without any advance payment just to save the precious life. This scheme is run by the Institute only of its kind in the State

May God bless all of you

Dr R. K. Patel
Director
UNMICRC, Ahmedabad

Central Library and Internet Centre at B. J. Medical College.

Central Library & Net Centre of B J Medical College & Civil Hospital, Ahmedabad came into existence in year 1946. It caters the information needs of over 2200 medical students, medical educationists, researchers, policy makers and planners. The library works 360 days in a year from 9.00am to 2.00pm. It is the largest resource of bio medical literature in this state. Besides the regular members it is open to entire bio-medical community of state to consult wide range of literature available. It has a collection of 14544 books and bound volume of journals 3573 dissertations, 2614 reports proceedings etc. 53 video cassettes and 223 compact discs. The library subscribes to 1514 electronic journals and 116 electronic books under a state consortium Gujarat medical consortium)

Info-Services

New information technologies have brought revolutionary changes in the field of library and information science. Health science Libraries are undergoing rapid changes with the advent of these technologies. To cope up with these changes, the library has introduced various state-of- he-art information technologies in last ten years with the financial help and kind support of Govt. of Gujarat Govt. of India, B J Medical College Alumni Association, USA & Ahmedabad and Pharmaceutical Industries of the state.

Computer Labs

It has full fledged 2 air-conditioned Computer Labs. Lab I with 15 PCs, printers, scanner, multimedias etc. for undergraduates and Lab II with 20 PCs, printers, scanner, CD writers, server, internet access for postgraduates and faculty members.

Establishment of Virtual Medical Library & Gujarat Medical Consortium

State government has established **"Virtual Medical Libraries"** in our state during the year 2008. Under this project, the users of all the six medical libraries are able to access e-databases of international journals and books through internet under **Gujarat Medical Consortium**. Initially it was covering 450 e-journals and 82 e-books has reached now up to 1514 electronic journals and 116 electronic books in the current year 2008-09. **Our library is the Coordinator for this State level Project.** All the e-publications are renewed for one current year.

Broadband Connectivity

With the financial assistance of state Government the library could get high speed Broadband Connectivity which is being renewed every year.

Net working with the departments of College & Hospital

Under a Gujarat State Networking Project in 2004 the Library of this institution has been connected with all the 25 departments of the college and civil hospital through networking.

Networking in Civil Hospital Campus

Under the above project of the state govt. it has seven hospitals and institutions, viz Civil Hospital, Institute of Kidney Diseases, U. N. Mehta Cardiology Institute, Ophthalmic Institute, Dental College & Hospital, Cancer Institute and Parapiegia Institute are also connected with the library of this college through networking.

Internet Connection through GSWAN

24 hours Internet facility has been given to each department of the college and hospital through Gujarat State Wide Area Network (GSWAN) under the above project in year 2004. Moreover each of the above institution and hospital has also been given internet connectivity.

Donation of 20 Computers by a Pharmaceutical Company

M/s B. Chemicals & Pharmaceuticals Ltd. and Indian Drug Manufacturer's Association have donated 20 P-4 Computers along with 20 computer tables & chairs

two air-conditioners each to the library of this college in 2004. Thus since 2004 the library has two full fledged Computer Labs, one used by undergraduate students and the other one is used by the post-graduates and faculty members of this college.

Free Text books for ST student under tribal welfare scheme

Total 961 Text books worth Rs. 5,24,899/- purchased during 2008-09 was given to 116 ST student for their study.

Books and furniture from Donation

About 1,000 text books worth Rs. 1,00,000/- are were purchased in year 2003 from the B. J. Medical College Alumni Association, USA. Funds B. J. Medical College Alumni Association, Ahmedabad donated funds for 200 steel chairs for the reading Halls in year 2004.

Renovation of Reading Rooms with Air-conditioning

The reading rooms for Faculty and Post graduates have been air conditioned and furnished with latest furniture by B. J. Medical College Alumni Association.

One reading room for under graduates is renovated and air conditioned with latest furniture by B. J. Medical College Alumni Association, USA in Feb.09. The renovation of other U.G. reading rooms with air-conditioned will be taken up soon.

Establishment of Electronic Information Cell.

A well furnished and air-conditioned Electronic Information Cell established with the help of B. J. Medical College Alumni Association, USA in year 2000 with 15 computers, 5 servers, 8 printers, softwares, multimedia systems, modem, microphones, speakers, internet connection etc. for the use of students.

Multi-media LCD Projector

For high electronic presentation on big screen one PHILIPS multi-media projector has been donated by BJMCAA, USA in year 2001. It is being extensively used for conducting various academic programs by faculty members of the institute.

Audio-visual Centre (Sanskruti Hall)

Established in 1986 with the assistance of BJMCAA,USA. Air-conditioned hall with a capacity of 125 seats, equipped with Television, VCR, Over Head Projectors, Sound System etc. and is extensively used for the academic programs, seminars, workshops, conferences, training, CME and teaching purposes.

Library Computerization & Automation

Library Management Software name "LIBRARIAN" is purchased recently and the services like acquisition, catalogue, circulation, serial control etc. will be computerized. Presently data entry & bar-coding of books/journals etc. is in process.

Establishment of Inter Linking Centre

Under a national project of Ministry of Health & Family Welfare, Govt. of India has identified our library for inter linking with the National Medical Library in year 2001. Under this project library is equipped with computers, scanners, internet connectivity and for running the centre.

Accreditation of Laboratories at B. J. Medical College & Civil Hospital, Ahmedabad

Background

The Government of India has authorized National Accreditation Board Of Laboratories (NABL) as the accreditation body for testing & calibration of laboratories. NABL is a registered society under the Societies Registration Act 1860 operates as an autonomous body. It has been established with the objective of providing Government, Industry Associations & Industry in general with a scheme of laboratory accreditation which involves formal part assessment of the technical competence of testing & calibration laboratory. NABL offers laboratory accreditation services in a non-discriminatory manner.

Benefits of Accreditation

1. Adds credibility and authenticity to the reports.
2. Better control of laboratory operations & feed back due to sound Quality Assurance system.
3. Enhances customer confidence & satisfaction.
4. Saving in terms of time & money due to reduction or elimination of need for retesting of products.

Scope of NABL Accreditation in Medical field

- Clinical Hematology
- Clinical Microbiology
- Clinical Biochemistry
- Cytology
- Histopathology

Preparation for Accreditation

Government of Gujarat entered in MoU with QCI for NABL Accreditation. As Civil Hospital laboratories has decided to seek NABL accreditation, a definite plan of action has been initiated. Dr. R. N. Gonsai has been nominated as Director to co-ordinate all activities related to seek accreditation.

A list of NABL documents have been prepared, to get fully acquainted with relevant NABL documents & understand the assessment procedure & methodology for filling an application. A Quality manual, Quality System Procedure & Primary Sample Collection Manual has been prepared for procedures and work docu ments etc.

Dr. Venkatesh & Dr. Virupraksh has been appointed as lead assessor & QCI representative by the Government of India to establish and operate national accreditation structure in the country. A team of about 15 people are working continuously to seek accreditation under the close observation of Technical Manager Dr. M. M. Vegad, Quality Manager Dr. H. M. Goswami & Deputy Laboratory Director Dr. Chhabara. The calibration of equipment has been carried out by Electronics and Quality Development Centre (EQDC) Gandhinagar which is NABL accreditated. The procurement of equipments like Automatic Tissue processor, cryostat, Automatic ESR analyzer and renovation of Histopathology & cytology department are under process.

An Internal Quality Control of the department and Inter-laboratory Quality Assurance for hematology with Green cross & Supratech laboratories have been initiated. External Quality Assurance with RIQAS- an international body in Clinical Hematology has been started since June-08. RIQAS establish a target scoring system for every parameter to understand efficiency of cell counters. External Quality Assurance with St. Johns Medical College, Banglore for cytology & Histopathology have been initiated. Internal audit in Pathology, Microbiology & Biology department to evaluate the nonconformities, to assess the degree of preparedness of laboratory for assessment have been arranged. The sensitization and training of the staff members by QCI representative is also continuously going on. The department expects to apply for pre-assessment audit by end of April 2009 and accreditation by the year 2010.

Scientific Events at B. J. Medical College, Ahmedabad

Anatomy Department

- QUIZ competation conducted by Dr. (Mrs.) C. A. Pensi, Dr. D. J. Trivedi, Dr. R. S. Tandan, Dr. S. M. Ruparel, Dr. S. G. Oza, Dr. H. B. Rajput on 08th - 10th Sept. 2008.
- Cadaveric workshop of kshaarsootra training conducted by Dr. H.R.Shah, Dr. A.B.Narvan, Dr. K.S.Desai on 6th Jan. 2009
- Cadaveric workshop on pain management by Dr. Divya Trivedi and Dr. Rajesh Patel (M.D. Anesthesia (U.S.A.) on 15th March, 2009
- Guest lectures by Dr. H. R. Jadav on Rectum and Anal Canal (Gross and Clinical Anatomy) at Directorate of I.S.M.H. Gandhinagar on 5th Jan 2009.
- Guest lectures by Dr. A. B. Narvan on Perineum (Gross and Clinical Anatomy) at Directorate of I.S.M.H. Gandhinagar on 5th Jan 2009
- Undertaken Social awareness activities for Dead body donation and embalming. The staff members receive dead body by donation with full honour in presence of Dean throughout the year

Medicine Department

- Conducted WHO approved four workshops for *Staged Diabetes Management*. SDM. Dr. B. D. Mankad & Dr. Asha N. Shah are designated as National resource persons
- Guest lectures by Dr. Asha N. Shah,

  "Management of type II Diabetes Mellitus" on World Diabetes Day at Ahmedabad Medical Association on 14th November 2008

  Faculty at "Staged Diabetes Management Programme" for M.O. on 19th Oct 2008 on behalf of "International Diabetes centre" along with WHO

  "Infective Diarrhoea" at Association of Physician of Ahmedabad in Sept. 2008

  Attended European Association for Study of Diabetes in Rome from 7th to 11th september 2008
- Guest lectures by Dr. Bipin R. Arora

  Approach to a case of Hypertension IMA Bopal on 20th September 2008

  Current status of health services for PLHA in state Annual conference of North Gujarat Physician's Association at Mt Abu on 18th January 2009.

  Natural history of HIV disease and WHO staging at school of Tropical medicine Kolkata on 4th March 2009.

  Universal precaution and PEP at IMA Ahmedabad on 8th March 2009

Microbiology Department

Guest lectures by Dr. Mitesh Patel on "Laboratory Diagnosis of STD" for Medical Officers & Laboratory Technician, GSAC S on February 2009

Guest lectures by Dr. Nidhi Sood "Role of laboratory in HIV diagnosis" in training conducted by NACO in February 2009 at ART centre and "Nosocomial infection an Overview" at NSS on 26th March 2009.

- Published a paper entitled "Sero-prevalence of HIV, Hepatitis B, Hepatitis C & Syphilis in Commercial sex workers of Ahmedabad city" by Dr. Sumeeta T. Soni & Dr. Mitesh H. Patel in *Gujarat Medical Journal*, Feb 2009 Vol 4(2

Nursing School

- The students prepared and displayed exhibitions on the project on A.V.AIDS, Nirog Baa, Varsh, Antenatal Care, PNDT Act, Beti Bachao Abhyaan etc

Physiology Department

- Research project on "Stress Audit of Teenage Student of Different Study Steam and Different Lamas of Yoga Practice and its effect on Cardiovascular Dynamics" by Dr. H. C. Parmar for the year 2008-09
- Organized a workshop on 'Climate Change, Impact on Health & Hospital Waste Management' on 29-02-09 under 'National Environment Awareness Campaign' Sponsored by Ministry of Environment & Forests, Govt. of India, New Delhi.
- Dr. Amit S. Mehta has been nominated for WHO Fellowship for Training Programme on 'Certified course for Doctors in Industrial Health' from 27 January to 25 April 2009
- Guest lecture by Dr. R. Dixit on "Workshop on Kahaar Sootra for Govt. Technical Officers" on 5th Jan. 2009 organized by Directorate, I&M, Govt. of Gujarat at SHIFW, Ahmedabad
- Dr. R. Dixit, Nominated as Member of Editorial Board of Indian Medical Journal for the term 2006 - 2009, an Official Journal of AMPA, Published from Kolkata, India
- Dr. J. M. Jadeja wrote a book "CHINTAN" in Gujarati and Hindi (concepts to solve various national issues). The book was released by Hon. Chief Minister Shri. Narendra Bhai Modi at a function held at Bhucharmori Shahid Smarak Dist. Jamnagar
- Published a paper entitled "Cardio Electrographic changes in patients with Chronic Obstructive Pulmonary Disease" Dr. C. J. Shah, Dr. R. S. Trivedi, Dr. Jasmin Jhaveri and Dr. R. Dixit in Indian Journal of Applied & Basic Medical Science: Sept 2008

Pathology Department

- Successfully Organized "CYTOCON-2008" National conference of Indian Academy of Cytology which was attended by 450 delegates and international faculty

Pharmacology Department

- Undertaken the manuscript management of *Indian Journal of Pharmacology* an Index journal and official publication of Indian Pharmacological Society. The editorial team includes Dr. R. K. Dixit as Executive Editor, Dr. Mira K. Desai and Dr. Chetna Desai as Assistant Editors, Dr. Anuradha Ganchi and Dr. Prakash Patel as Editorial Assistants.
- The editorial team organized a workshop on "Scientific Writing" on 29th March 2009. It was attended by 42 delegates from academic institutions as well as pharmaceutical industry from all over Gujarat. The workshop was interactive, participatory and focused on the basic skills of writing a research paper by imparting knowledge, sharing viewpoints and training through group exercises.
- Actively involved in reporting Adverse drug reactions from various departments of Civil Hospital as well as from private practitioners

- Guest lectures by Dr Mira K Desai,

  Resource person at CMCL & NPP on Evaluation Methods in Medicines' workshops at MP platinum jubilee celebration organized by N H L Municipal Medical College Ahmedabad and Medical College, Bhavnagar

  'Economic burdens of Adverse drug reactions' at National Pharmacovigilance Workshop' organized at Kolkata on 9-11 Jan 2009

  Safety reporting in clinical trials at AICTE seminar on Clinical Research on 13-14th Feb 2009 Bavdhnagar

  Resource person at International training course on Preventing Rational Use Of Drugs in the Community' sponsored by WHO at IHMR Jaipur 23rd Feb. 5th April 2009

- Guest lectures by Dr Chetna Desai,

  Medical Education Technology workshops and MCI Platinum Jubilee celebrations in the state

  Resource Person at the National Pharmacovigilance Programme for ASU Medicines

  Awarded CMCL FAIMER Fellowship in Medical education

  Resource person at the CMCL FAIMER and BSMC FAIMER fellowship programme

- Guest lecture by Dr A M Gandhi on 'Small Group Teaching Methodology' at MCI Platinum Jubilee Celebration at M P Shah Medical College, Jamnagar Feb 2008

- Poster presentation on 'Prospective analysis of ADRs in geriatric patients at CHA by Doshi MS, and 'Some interesting and unusual ADRs reported in CHA' by Prajapati BA At Annual conference of IPS at AIIMS New Delhi Dec 2008

- Paper Presentation on, "A prospective analysis of serious ADRs reported in patients at CHA by Mor M N, Annual conference of IPS (Gujarat Chapter) at Rajkot in Feb 2009

Preventive and Social Medicine

- Training Program

  Outbreak investigations sponsored by WHO from 22nd to 29th June 2008

  Field epidemiology training program for state level senior officers of Kerala Andhra Pradesh and Puducherry from 29th Dec 08 3rd Jan 09 and 21st Feb. 7th March 09

  RTI STI training' for MOs, FHS and lab. technician of Ahmedabad and Gandhinagar districts

  HIV TB training' to Medical officer and counselor of ICTC centres

  IMNCI training to the Medical Officers, staff members of Sabarkantha districts and Civil Hospital Ahmedabad

  EPI INFO' training program for data analysis to the resident doctors

- Research Project

  ICMR Task Force Study entitled "Consumption pattern of carbonated soft drinks of Indian population at different times of the year" by Dr A Bhagyalaxmi

- Public Health Activities

  Integrated Rural AIDS Awareness Program (IRAAP) baseline HIV/AIDS survey of Mehsana district, by Dr Sangita Jain

- [illegible] Resurvey of [illegible] of Gujarat state (Ahmedabad, Sabarmati, Mehsana, Sabarkantha, Gandhinagar, Patan, Banaskantha, Kheda, Anand)
- Published paper entitled 'Study of perception and practices in prevention of infection amongst Dental Surgeons' Journal of the Indian Prosthodontic Vol 61 no 11 Nov2006 by Dr Mahesh, Dr A Bhagyalaxmi & Dr Anjali Singh

TB and Chest Diseases Department

- One of the 14 centres in INDIA to have ICMR PROJECT to carry out Prevalence of Asthma in Gujarat since October 2006
- Faculty members are actively involved in state level [illegible] activities.

Gujarat Cancer and Research Institute

Radiotherapy

- Dr. Mahesh Mehta won Best Paper Award at 9th West Zone Chapter of AROI in Feb 2008.

Division Molecular Endocrinology II

- Ms Tara B Rawal, won [illegible] Award for essay on topic "Modern [illegible] is very" and Rajnikant Rao Award for the best poster presentation on "Molecular aberrations in oral carcinogenesis: Significant risk predictors in malignant transformation and tumor progression" at IWCR February 7-9, 2008.

Immunohistochemistry and Flow cytometry Division

- Ms Shalini Mehta, Junior Research Assistant won first prize for oral presentation in 32nd Annual Conference of Gujarat Pathologists & Microbiologists, February 3, 2008.

Research projects, training programs, community programme at GCRI

- Research projects - 5
- Training programs, CME, workshops - 12
- Community Programs
  - National Registry Programme - ICMR
    Ahmedabad District Cancer Control Programme - Govt. of India under NCCP
  - Prevention of cancer - Anti-Tobacco drive
    Early detection - Vasna Centre & Cancer Detection Camps
  - Hospice care - Home Hospice care
    Helping hand to poor patients
  - Telepathology and Telemedicine projects

Winning Strokes

Proud moments for the Achievements and Excellence of our team.....
BJMC congratulates them all !!!!

- **Dr Ketan Desai** Professor & Head of [illegible]gy has been honored the prestigious position of **President of Medical Council of India.**

- The [illegible]te successfully organized **A Regional Workshop-West Zone** on **"Medical Education Technology"** under MCI platinum jubilee celebration on 20th January 2009
- Anti-Retroviral Therapy (**ART**) centre has been recognized as **"Centre Of Excellence And Training Institute"** for HIV care, support and treatment by NACO Government of India **Dr B. D. Mankad** is the nodal officer and **Dr Dipin K. Amin** is the training in charge He has successfully conducted more than 30 workshops and trained faculty members of different medical colleges and health institutions of the country The centre has also conducted more than 10 workshops for medical officers and paramedical staff of medical education and services It is the only centre for 2nd line ART drugs for the states of Gujarat Rajasthan and Madhya Pradesh **Dr. B. D. Mankad** has been trained at Thailand in Nov 2008 for II line ART by WHO
- **Tuberculosis and Chest Diseases Department** is the first **DOTS-PLUS SITE** in INDIA to have **DOTS-PLUS programme** implemented by Govt. of India
- **The central library** is the **Coordinator for State level Project of electronic journals.** It subscribes to 15.4 electronic journals and 116 electronic books under a state consortium Gujarat Medical consortium
- **Polio Laboratory at Microbiology Department has been accreditated by WHO** for ITD faculty in year 2008-2009
- The Department of skin and V D is recognized as a **Centre of Excellence** for Sexually Transmitted Infections The present centre is developed as the Regional S T D reference Research and Training Centre This will be equipped for early diagnosis, treatment, prevention of drug resistance of these infections It will also provide facilities for research and training in this area

Hepatitis B Outbreak in Modasa Town : *How Gujarat Government responded to the deadly infection.*

Atul V. Trivedi[1] Mitesh K. Patel[1]

ABSTRACT

Hepatitis B is unusual to occur as an epidemic in general population. Recently Modasa town of Sabarkantha district witnessed the outbreak of Hepatitis B. Out of 326 confirmed cases, 72 deaths were reported with case fatality rate of 22.08%. Department of Health and Family Welfare, Government of Gujarat launched several important steps to control the epidemic. Mass Immunization campaign in Modasa town was undertaken successfully. Observations of this outbreak are documented in this report.

Key word : Hepatitis B Virus, Mass immunization program, Injection safety

Introduction

Hepatitis B is an important etiological factor for acute and chronic hepatitis, cirrhosis of the liver and hepatocellular carcinoma thus representing one of the most serious public health problems. Gujarat has experienced recently one of the major outbreaks in Modasa town in Sabarkantha district during month of February 2004.

Hepatitis B is unusual to occur as an epidemic in general population. However, several outbreaks have been reported in healthcare provider (medical and paramedical population) in India and world wide.

Problem Statement

Hepatitis B virus (HBV) infection is an international health problem with an estimated prevalence of 2-20% in India. HBsAg carrier rate varies from 0.1 to 20% in different population around the world.[1] The HBsAg positivity in children below 16 years in India ranges from 1.3-12.7%, while in adults it is 3.3 - 8.6% and in antenatal pregnant women ranges from 1.12.8% with a mean of 4.12%.[2]

Hepatitis B Virus

The hepatitis B virus, a hepadnavirus, is a 42 nm partially double stranded DNA virus, composed of a 27 nm

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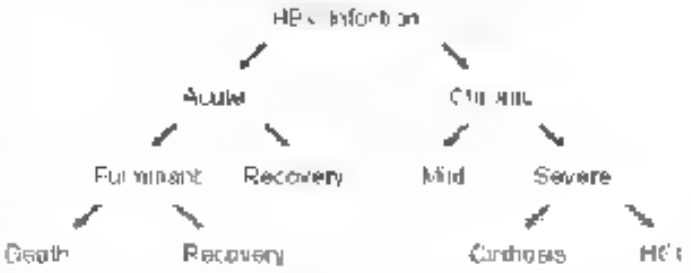
Spectrum of liver disease after HBV infection



on nucleocapsid core(HBcAg) surrounded by an outer lipoprotein coat (also called envelope) containing the surface antigen (HBsAg). The family of hepadnaviruses comprises members recovered from a variety of animal species, including the woodchuck hepatitis virus (WHV), the ground squirrel hepatitis virus (GSHV), and the duck HBV. Common features of all of these viruses are enveloped virions containing 3 to 3.3 kb of relaxed circular, partially duplex DNA and virion-associated DNA dependent DNA polymerases (DNA can repair the gap in the virion DNA template and have reverse transcriptase activities. Hepadnaviruses show narrow host ranges, growing only in species close to the natural host, like gibbons, African green monkeys, rhesus monkeys, and woolly monkeys.[3]

The hepatitis B virus life cycle

The HBV virion binds to a receptor at the surface of the hepatocyte. The mechanism of HBsAg binding to a specific receptor to enter cells has not been established yet. Virus nucleocapsids enter the cell and reach the nucleus, where the viral genome is delivered.[3]

Stability of Hepatitis B Virus

Infectivity is lost after autoclaving at 121° C for 20 min or dry heat treatment at 160° C for 1 hour. HBV is inactivated by exposure to sodium hypochlorite (500 mg free chlorine per litre) for 10 min, 2% aqueous glutaraldehyde at room temperature for 5 min, heat treatment at 98° C for 2 min, formaldehyde at 18.5 g/l (5% formalin in water), 70% isopropyl alcohol and 80% ethyl alcohol at 21° C for 2 min.[2]

Pathogenesis

The course of hepatitis B may be extremely variable. Hepatitis B virus infection has different clinical manifestations depending on the patient's age at infection and immune status and the stage at which the disease is recognized. During the incubation phase of the disease (6 to 24 weeks), patients may feel unwell with possible nausea, vomiting, diarrhea, anorexia and headaches. The patients then have clinical jaundice, though low grade fever and loss of appetite may improve. The asymptomatic cases can be identified by detecting biochemical, virus specific serologic alterations in their blood. These patients may become silent carriers of the virus and constitute a reservoir of infection.

Most adult patients recover completely from their HBV infection, but about 5 to 10% will not clear the virus and will progress to become asymptomatic carriers or develop chronic hepatitis, possibly resulting in cirrhosis and/or cancer. World wide, Hepatitis B causes about 4 million acute infections, about 1 million deaths occur each year due to chronic forms of the disease and about 350 million people are estimated to be infected chronically with HBV. HBV is about 100 times more infectious than HIV.

Role of non- human primates in the transmission of HBV

Only non-human primates can develop productive HBV infection are the great apes (e.g. chimpanzees, orangutans and gorillas). Chimpanzees have served as the model for the study of HBV infection for over 20 years.[2]

Hepatitis B Vaccine

The World Health Organization recommends immunization of all children with three doses of 10 micrograms each of hepatitis B vaccine given intramuscularly at 0, 1, 6 months of age. Two different vaccines are available for HBV: Plasma derived and recombinant DNA. When administered properly, hepatitis B vaccine induces protection in about 95% of recipients. A safe and effective vaccine against HBV infection has been available since last 20 years. HB vaccine is effective in preventing HBV infection when it is given either before exposure or shortly after exposure. At least 85% to 90% of HBV associated deaths are vaccine preventable.[3,4,5,6]

Current epidemic

The first case was admitted to Sarvajanic Hospital, Modasa on 26th January, 2009. Since then total 326 confirmed cases were reported to health authority up to 06th April, 2009. Total 72 deaths were reported and thus case fatality rate is 22.08%. Rapid surveillance system has been established in the district and regular surveillance is going on in Modasa town and in Sabarkantha district to find out suspected cases in the community. The demographic profile of the patients with hepatitis B is as shown in table 1. A majority of the cases were males in the age group of 13 to 45 years.

Table 1 : Morbidity due to Hepatitis B (confirmed cases) according to age and sex distribution at Modasa Town (Data up to 06/04/2009).

Sr. No.	Age	Male (%)	Female (%)	Total (100)
1	0 to 12 Year	8 (50.00)	8 (50.00)	16 (100)
2	13 to 45 Year	158 (64.23)	88 (35.77)	246 (100)
3	46 to Above	41 (64.06)	23 (35.94)	64 (100)
	Total	207 (63.50)	119 (36.50)	326 (100)

Table 2 : Mortality due to Hepatitis B according to age and sex distribution at Modasa Town (Data is up to 06/04/2009.)

Sr. No.	Age	Male (%)	Female (%)	Total (100
1	0 to 12 Year	2 (66.67)	1 (33.33)	3 (100)
2	13 to 45 Year	34 (65.38)	18 (34.62)	52 (100)
3	46 to Above	9 (52.94)	8 (47.06)	17 (100)
	Total	45 (62.50)	27 (37.50)	72 (100)

Similar to table 1, mortality due to hepatitis B also matches proportionately to morbidity

Response to Outbreak (Prevention and Control Measures)

Looking at severity of condition and gravity of problem in community a rapid operation were launched to control epidemic. Expert teams from NICD, Delhi and NIV Pune visited the place as and when needed and state health authority took action measures in consultation with them. Protocol for diagnosis and treatment was developed to guide district health authority.

Treatment of cases and diagnostic facility for suspected cases were established in district as per the protocol. Special ward was established in Civil Hospital, Ahmedabad with all the facility to tackle any kind of emergency/development for patients of Hepatitis B only. Confirmation of disease was done at each level (from district hospital to state reference laboratory at BJMC, NIV Pune and NICD, Delhi) to check high mortality. Looking at age distribution, adults were highly affected and detailed analysis confirmed that mode of transmission was from unsafe injection practices by private practioners in this town and surrounding area. In current epidemic high case fatality was attributed to mutant hepatitis B virus which caused fulminant liver disease resulting in sudden death.

Currently 158 patients are on Anti viral treatment (Tab. Lamivudine) as on date 24/04/2009. The treatment is free of cost. One oral tablet lamivudine (100mg) is given per day for 90 days without fail to each case of Hepatitis B in presence of health worker as per strategy of DOT in RNTCP. As per the advice and guidance from National Institutes, whole population of Modasa town was vaccinated for Hepatitis B by the mass immunization campaign. It was planned to give three doses of Hepatitis B vaccine with one month interval. First round of mass immunization in Modasa town was done on 23rd February 2009 and second round on 22nd March 2009. Mass Immunization of Hepatitis B is done for the first time at the international level on such a large scale.

Micro-planning was done with all the precautions of injection safety and cold chain maintenance. Quality assurance was given top most priority in this mass immunization program. Total 60 booths were created to provide vaccination on first day and door to door round was planned next day onwards to provide services to beneficiaries who cannot walk up to booth. Table 3 shows average trained staff per booth.

Table 3 : Available staff at booth and their qualification

Sr No.	Staff	Position per booth
1	Average staff per booth	11
2	M.O	1
3	A.N.M.	6
4	M.P.H.W	3
5	S.I.	1

Anganwadi and para medical staff was trained for this campaign. Apart from this there was separate staff for supplying vaccine, other logistics related to it and to collect biomedical waste from every booth from time to time. All these activities were supervised and monitored by the team of Community Medicine Department of B. J. Medical College, Ahmedabad and Quality Assurance Medical Officers of Health department. The details of vaccination are shown in table 4 and 5.

Table 4 : First round data of Mass Immunization Program in Modasa Town,

Date of Vaccination 23/2/09 to 25/2/09

Sr No.	Days	Pediatrics Beneficiaries	Adult Beneficiaries	Total Beneficiaries
1	First day	11908	48945	60853
2	Second day	2844	12098	14907
3	Third Day	886	2942	3828
	Total	15405	59487	74592

Table 5 Second round data of Mass Immunization Program in Modasa Town,

Date of Vaccination 22/3/09 to 25/3/09

Sr No.	Days	Pediatrics Beneficiaries	Adult Beneficiaries	Total Beneficiaries
1	First day	11553	45634	56987
2	Second day	560	2417	2977
3	Third Day	238	1097	1335
4	Fourth Day			273
	Total	12351	49148	61372

Table 4 and 5 depicts first and second round coverage of Hepatitis B vaccination in Modasa town. Up to now two rounds are over and third round is planned in first week of May, 2009 due to some administrative reason.

Due to awareness, mass public health and some administrative as well as legislative (legal) actions with proper approach, considerable success has been achieved to control this epidemic. However following measures needs to be considered to prevent this disease in future.

- Hepatitis B vaccination to be included in Expanded Program of Immunization
- Universal Safety Precautions (Safe Injection Practices)
- Screening of blood and blood products to ensure blood safety
- Prevention of mother to baby transmission

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Acknowledgement

We sincerely thank Dr. Amarjeet Singh, Commissioner of Health Medical Services and Medical Education, Govt. of Gujarat for encouragement and support. We are also grateful to Dr. Paresh Dave, Additional Director (Health), Dr. S. I. Gandhi, Joint Director (Epidemic), Dr. Meena, Quality Assurance Medical Officer, Commissionerate of Health Medical Services and Medical Education, Gandhinagar.

We thank and acknowledge the support and co-operation of the team members Dr. M. F. Patel, CDHO, Dr. A. K. Shah, EMO, Dr. Mishra, MO of Sabarkantha district.

We are also thankful to Dr. Pradeep Kumar, Professor and Head, Dr. Geeta Katha, Professor, Dr. A. Bhagyalaxmi, Associate Professor, P & S M, B. J. Medical College, Ahmedabad for their guidance in preparing this document.

A Study of Multidrug Resistant Organisms at Civil Hospital, Ahmedabad.

M H Patel S P Soni* M M Vegad***

ABSTRACT

Resistance to antimicrobial agents is common in gram negative bacilli like *Staphylococcus & Enterococcus*. We document here the prevalence of multidrug resistant organism isolated from patients attending Civil Hospital, Ahmedabad (CHA) in year 2008. Out of 7e4e isolates, 2465 (33.4 %) *Escherichia* 1371 (18.5 %) *Acinetobacter* 1350 (18.2 %) *Staphylococcus* 1325 (17.9 %) *Pseudomonas aeruginosa*, 139 (1.7 %) *Enterococcus* were found. Out of these isolates 68.9% gram-negative bacilli were extended spectrum β- lactamase (ESBL) positive. 17.3 % *Staphylococcus* were methicillin resistant. 8.4 % of gram-negative bacilli were Inducible β-lactamase positive and 3.8 % of non fermenter gram-negative bacilli were metallozyme positive. Vancomycin resistant *Staphylococcus* & *Enterococcus* were not found. Hospital infection control programme and stringent protocol such as Antibiotic policy are mandatory to curb these microbes in Civil Hospital, Ahmedabad.

Key words Multi-drug resistant organisms, Antimicrobial agents, Beta-lactamase

Introduction

Microbes (bacteria, fungi, parasites and viruses) cause infectious diseases, and antimicrobial agents have been developed to combat the severity and spread of many of these diseases. The emergence of resistance to these drugs is a natural biological phenomenon. The use of an antimicrobial for any infection, in any dose and over any time period, causes a "selective pressure" on microbial populations. Under optimal conditions, the majority of the infecting microbes are killed and the body's immune system can deal with the rest. However, if a few resistant mutants exist in the population under selective pressure and the treatment is insufficient or the patient is immunocompromised, the mutants can flourish. Thus treatment may fail resulting in prolonged illness and greater risk of death.[1] This provides greater opportunities for the resistant strain to spread. The emergence of resistance to these "wonder drugs" is now so widespread that it threatens to undermine or even reverse those gains.[2] Today, when a resistant strain emerges, it is not necessary to find a new 'wonder drug' ready on the shelf. Thus, multidrug resistant organisms are a growing threat to public health, especially in healthcare settings. Over 70% of the bacteria causing hospital-acquired infections are resistant to at least one of the most commonly used antimicrobials. The commonly found multidrug resistant organisms are as follows

- **Methicillin resistant *Staphylococcus*** (MRS) are resistant to all β-lactam antimicrobial agents including penicillins, cephalosporins, carbapenems, monobactams & combinations of β lactamase inhibitors due to change in penicillin binding protein[2] (PBP[2]). The drug of choice for these organisms is limited to glycopeptides (vancomycin & teicoplanin), oxazolidones (linezolid), newer tetracyclines (tigecycline), and rifampin.
- **Vancomycin resistant *Enterococcus*** (VRE) & ***Staphylococcus aureus*** (VRSA) are sensitive to only linezolid, tigecycline, quinupristin & dalfopristin.[3]
- **Extended spectrum β-lactamase** (ESBL) producing *E coli, Klebsiella* etc. are resistant to all penicillins, cephalosporins & monobactams but are sensitive to the combination of β- lactam + β- lactamase inhibitors and carbapenems.[4]
- **Metallo β-lactamase** (MBL) producing non fermenters like *Pseudomonas aeruginosa*, *Acinetobacter* etc. are sensitive to only β-actam monobactam (Aztreonam).
- **Inducible β-lactamase** (Amp C) are common in SPICE group (S *Serratia*, P *Pseudomonas aeruginosa*, I *Indole* positive *Proteus*, C *Citrobacter*, E *Enterobacter*). They are sensitive to only β lactam-carbapenems (imipenem, meropenem).

* Assistant Professor,
** Professor and Head, Microbiology,
B J Medical College, Ahmedabad

Variable resistance pattern is observed in fluoroquinolones, aminoglycosides, macrolides and tetracycline in the above mentioned mechanism of resistance.

- **Multi drug resistant tuberculosis** (MDR TB) is resistant to first line anti-tubercular drugs rifampicin and isoniazid.
- **Extensive drug resistant tuberculosis** (XDR TB) MDR TB when shows resistance to fluoroquinolones and at least one of three injectables drugs like amikacin, kanamycin and capreomycin.
- Chloroquine resistant malaria is global challenge for community. In recent years, Artemisinin drug resistance is emerging & it's a major concern to NACP III. In yeast, *Candida tropicalis* & *krusei* are becoming more prevalent & resistant to a very common antifungal drug Fluconazole.[2] Considering the magnitude of the problem, the present study was undertaken to find out the pattern of multidrug resistance at CIIA.

Materials & Methods

A total of 7404 bacteria isolated in year 2008 from clinical specimens were used in the study. The isolates were confirmed by the biochemical reactions. They were tested for antimicrobial susceptibility by modified Kirby Bauer Method with recommended antibiotics by Clinical and Laboratory Standard Institute (CLSI) for gram-positive and gram-negative bacteria. Zone of the inhibitions were measured & interpreted as per CLSI guidelines. Isolates were screened for various mechanism of resistance.[3]

MRS - Resistance to oxacillin 1 microgram.

VRE - Resistance to vancomycin 30 micrograms.

ESBL Positive - Resistance to antibacterials (cefotaxime 30 micrograms, ceftazidime 30 micrograms, ceftriaxone 30 micrograms, aztreonam 30 micrograms) & sensitive to ampicillin/sulbactum 20 microgram & piperacillin / tazobactum 110 micrograms).

Metallo-zymes Positive - Resistance to (imipenem, imipenem 10 micrograms) & sensitive to (aztreonam 30 micrograms).

Inducible β- lactamases(Amp C) Positive- Resistance to those antibacterial (cefoxitin 30 micrograms, cefotaxime 30 micrograms, ceftazidime 30 micrograms, ceftriaxone 30 micrograms, ampicillin / sulbactum 20 micrograms and piperacillin tazobactum 110 micrograms, and sensitive to (meropenem/ imipenem 10 micrograms).

Results

Table 1. Prevalence of Bacterial isolate from Civil Hospital, Ahmedabad - 2008

Organism	Number of isolates	% of isolate
Acinetobacter sp.	225	3.1
Candida sp.	156	2.1
Citrobacter sp.	6	0.1
Escherichia coli	2,469	33.3
Enterococcus sp.	139	1.9
Klebsiella sp.	1,367	18.5
Pseudomonas aeruginosa	1,326	17.9
Proteus sp.	188	2.5
Staphylococcus aureus	452	6.1
staphylococcus, coagulase negative	898	12.1
Others	185	2.5
Total	7404	100

Table 2. Prevalence of mechanism of resistance of bacterial isolates from Civil Hospital, Ahmedabad - 2008

Organism	Number of isolates	% of isolate
Gram negative bacilli	3084	
ESBL positive	384	08.9
ESBL negative	1757	81.1
Non fermenter gram-negative bacilli *(pseudomonas, acinetobacter etc.)*	1750	
Metallozyme positive	58	3.8
Metallozyme negative	1492	96.2
Gram negative bacilli	3084	
Inducible β lactamase positive	469	8.4
Inducible β lactamase negative	5115	91.6
Staphylococcus	1350	
Methicilin resistant	243	17.5
Methicilin sensitive	1117	82.7

- Vancomycin resistant *Staphylococcus & Enterococcus were not observed*

Discussion

Resistance to the most potent antibacterial has recently extended to members of the *Enterobacteriaceae* family, including hospital associated strains of *Klebsiella*, *Escherichia coli* and *Enterobacter*. Multidrug resistant *Pseudomonas aeruginosa* and *Acinetobacter* are less-known therapeutic challenges among the gram-negative bacteria [4]

Until recently, carbapenems, such as imipenem, were almost uniformly active against resistant gram-negative organisms, but some strains have now developed effective ways to deal with the carbapenems, including the production of β-lactamases (designated carbapenemases) that demolish the carbapenems. This situation is further complicated by the fact that the resistance mechanisms also affect other classes of antibacterials (e.g., quinolones, aminoglycosides, tigecycline). Moreover, the common presence of these β-lactamase genes of gram-negative bacteria on transferable mobile elements means that these genes could reach virtually any gram-negative bacterium and become a major threat in the future. Recognition of the presence of a carbapenemase in a gram-negative organism is of paramount importance since strict infection control measures are required to avert hospital epidemics and the dissemination of these genes to other gram-negative species [5]

The accurate & early detection of Methicilin resistance in *Staphylococcus* is of key importance to the treatment and prognosis of infection, as few antibacterial are effective against them.

Faced with this gloomy picture, 21st century clinicians must turn to compounds developed decades ago and previously abandoned because of toxicity. The resurrected polymyxins (colistin, with or without rifampin), are often the only available alternative for some pan-resistant gram-negative, particularly *Acinetobacter* & *Pseudomonas aeruginosa*.

Recommended line of empirical therapy based on antibiogram study

Urinary tract infection Common isolates are gram-negative bacilli; hence ampicillin + sulbactum / amoxycillin + clavulanic acid and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

Lower respiratory tract infection - Common isolates are gram-negative bacilli, hence cefoperazone + sulbactum, aminoglycoside, and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

Blood stream infection Common significant isolates are gram-negative bacilli, hence cefoperazone + sulbactum, aminoglycosides, and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin)

Skin & Soft tissue infection. Gram negative bacilli & gram positive cocci both are equally prevalent, hence culture & sensitivity is essential. Even though broad spectrum antibacterial like ampicillin + sulbactum / amoxycillin + clavulanic acid and third generation fluoroquinolones (levofloxacin, gatifloxacin, moxifloxacin

If patient does not responding to the antibacterial as per culture report, fungal pathogens are suspected

Conclusion

It is more difficult than ever to eradicate infections caused by antibiotic-resistant "superbugs," and the problem is exacerbated by a dry pipeline for new antimicrobials with bacteria-specific activity against gram negative bacteria and enterococci. A concerted effort on the part of academia, researchers and their institutions, industry and government is crucial if humans are to maintain the upper hand in this battle against bacteria - a fight with global consequences.

"It is better to spend money in diagnosis of infection rather than costly empirical antimicrobial agent."

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Seminal Vesicle Sparing Laparoscopic Radical Prostatectomy Using A Low-Energy Source: Better Continence And Potency

*Nirmit J Shah*** Ketan R Desai****, Ketan Shukla** Rajesh Sachan* V Goyal* A Nath* N Jain* K Kapadia* S Bajaniya**

ABSTRACT

Objectives Ongoing with the newer developments in laparoscopic radical prostatectomy (LRP), we report our experience in a consecutive series of 45 patients with a mean 18-month follow up. We also studied the use of a low energy source especially in the region of the prostatic apex and the neurovascular bundle and evaluated its outcome on continence and potency.

Methods Between November 2003 and March 2009, 56 patients aged 50-80 yrs underwent LRP with vesicourethral anastomosis. Out of these, 42 patients with minimum follow-up of 3 months were selected for the study. Of these the initial 16 patients were operated by the routine method and the 26 patients operated in the later part of our experience were operated upon using a minimal energy source.

Results The mean follow up was 18 months (range 3-60). Continence was evaluated at 1, 3, 6 and 12 months. Eleven of the 16 patients in Group I were continent as compared with all of 26 patients in Group II. The difference in continence rates was mainly due to loss use of vesicourethral and hormone sculpel at the bladder neck. Of the eight patients who were potent pre-operatively in Group I, four remained potent 3 months after LRP. In Group II, 20 of the 26 patients were potent pre-operatively and 16 remained potent 3 months after LRP.

Conclusion Use of a low energy source at the bladder neck and neurovascular bundle, sparing of seminal vesicle and leaving behind a long, healthy stump of the urethra during apical dissection, is associated with better continence and potency without compromising oncological outcome.

Introduction

The first laparoscopic radical prostatectomy (LRP) was performed in 1997 by Schuessler *et al*.[1] Since then LRP has been reported widely and it has become increasingly important as a treatment for localized carcinoma of the prostate. Two large early series originated in France and LRP has since been described in large series (greater than 500 cases) from Germany, Belgium, Japan, the United Kingdom, the United States and Italy. Cumulatively well over 8000 procedures have been published worldwide using various techniques, surgical approaches, surgical and robotic instruments. Several other centres are performing LRP with newer technical variations. Gradually, this is leading to a refinement of the techniques. However, the ongoing debate regarding bladder continence and potency preservation is still going on. We present our initial experience of LRP with the classical transperitoneal technique. We also compare the results of surgery in Group I (16 cases) performed in the initial part of our series between November 2003 and March 2007 using the routine technique, with Group II (26 cases), performed in the later half of our experience between April 2007 and August 2008 using a low-energy source.

Materials and Methods

From November 2003 to March 2009, a total of 56 cases of radical prostatectomy were operated by the laparoscopic technique. Of these, 42 patients with a minimum follow up of 3 months were

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selected for the study. The initial 16 patients were operated with the routine technique and 26 patients operated in the latter part (Group II) were operated using a minimal energy source. Both groups were largely similar with respect to mean patient age, Gleason score, general co morbid conditions, and T stage.

Procedure

An inverted U shaped anterior peritoneotomy incision is placed using a hook electrode cautery. The bladder is then dissected off of the anterior abdominal wall, allowing access to the space of Retzius. The endopelvic fascia is incised exposing the lateral margins. Puboprostatic ligaments are excised. The dorsal vein complex (DVC) is exposed and dissected all around the (DVC), allowing placement of a suture ligature around the DVC for hemostasis. The bladder neck is incised and the incision is carried out all around the bladder neck. Finally, the urethra is transected at the apex of the prostate, leaving behind an adequate length of membranous urethra. Urethrovesical anastomosis is then performed using a 3/0 polyglactin suture with interrupted stitches. In the latter part of our experience (Group II) we were specifically careful in our dissection of the region of the bladder neck and the neurovascular bundle. We also spared the tips of the seminal vesicles which are closely related to the pelvic nerves.

Fig. 1 Intra operative photograph sparing seminal vesicle

We used sharp dissection with scissors in this region and reserving pin point sharp cautery to control any bleeding vessels in this region. Thus, a minimal energy source was used in this dissection. Besides this, a healthy urethra was preserved during apical dissection (Figures 2 and 3).

All patients in their postoperative period were administered IV antibiotics and analgesics as per the requirement. All patients were mobilized on the first postoperative day. Patients were discharged as soon as they were comfortable on a per urethra catheter. Perineal cystogram is performed on the 10th postoperative day. In case the anastomosis was healthy the per urethral catheter was removed. Otherwise, the per urethral catheter was kept for one more week and removed before checking the anastomosis radiographically. The groups were compared according to operating room time, estimated blood loss, transfusion rate, conversion rate, complication profile, catheter days, hospital stay, continence, and erectile function (Table 1 and 2).

Table 1 Patient's profile in the groups for radical prostatectomy using different method

	Group I (Routine method)	Group II (Minimal energy source)	Total
No. of patients	16	26	42
Patients age range	63-73	56-80	56-79
Gleason range	5-8	6-7	5-8
Prostate volume (gms)	16-70	20-50	16-70

Table 2 Comparison of operative and post-operative characteristics in the groups for radical prostatectomy using different method

Parameter	Group I (n = 16) (Routine method)	Group II (n = 26) (Minimal source energy)
Mean operating time in minutes (range)	251 (200-270)	218 (185-250)
Median blood loss in mL (range)	890 (800-1200)	920 (600-1058)
Average transfusion units (range)	1.56 (0-4)	1.60 (0-3
Conversion to open	4/16	2/26
Rectal injury	2/16	1/26
Hospital stay in days (range)	4.25 (3-12)	4.71 (3-9
Continence at 3 months	11/16	21/26
Potency	4/8	18/20

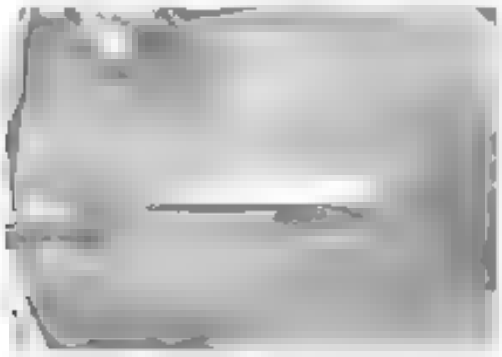

Fig 2 Post operative photograph of the incision length and port site

Results

The mean operative time for Group I (routine LRP) was 251 min and for Group II (LRP with low-energy usage) was 218 min. The median blood loss in Group I was 890 ml and in Group II was 920 ml. However, the average transfusion requirement (allogenic) was 1.56 units in Group I and 1.60 units in Group II, which is not statically significant.

Conversion to open surgery due to bleeding or rectal injury was 25% (4/16) in Group I and 7.6% (2/26) in Group II. Incidence of rectal injury in Group I was two patients 12.5% (2/16) and in Group II was 3.8% (1/26). All patients with rectal injury were diagnosed intra-operatively and converted to open procedure and the injury was repaired in two layers and a rectal drain was placed for 5 days postoperatively. No incidence of delayed rectal leakage was seen in any of the three cases. Patients were kept in the hospital till the patients were ambulatory and felt fit enough to go home. In Group I, the hospital stay was 4.25 days with one patient of rectal injury staying up to 12 days due to sub acute intestinal obstruction. This was not statically different to the average hospital stay of 4.71 days in Group II. Continence was evaluated at 1, 3, 6, and 12 months. Eleven of the 16 (68.7%) patients in Group I were continent as compared with 21 of the 26 (80.7%) patients in Group II. In Group I only eight patients of the 16 were potent pre-operatively and four (50%) of them remained potent 3 months after LRP. In Group II 20 of the 26 patients were potent pre-operatively and 16 (80%) remained potent 3 months after LRP.

Discussion

The mean operative time for Group I (routine LRP) was 251 min and for Group II (LRP with low-energy usage) was 218 min. Moreover, the slight increase in duration in Group I may be due to the learning curve and also the increased number of rectal injury in Group I.

The median blood loss in Group I was 890 ml and in Group II was 920 ml. The median estimated blood loss was slightly higher in Group II with less use of electrocautery and harmonic scalpel. Higher blood loss was also expected as a part of the procedure due to vigorous use of scissors and sharp dissection in Group II. However, the average transfusion requirement (allogenic) was 1.56 units in Group I and 1.60 units in Group II. Conversion to open surgery was 25% (4/16) in Group I and 7.6% (2/26) in Group II. No increases in the conversion rate were seen in Group II despite sharp

dissection and slight increase in bleeding. The reason for open conversion was either rectal injury or bleeding in most cases. One case had to be converted to open surgery due to difficulty in dissection at the apex. Incidence of rectal injury in Group I was two patients 12.5% (2/16), and in Group II was 3.8% (1/26). Patients were kept in the hospital till patients were ambulatory and felt fit enough to go home. In Group I, the hospital stay was 4.25 days with one patient of rectal injury staying up to 12 days due to sub acute intestinal obstruction. This was not statistically different for the average hospital stay of 4.71 days in Group II. Continence was evaluated at 1, 3, 6, and 12 months. Eleven of the 16 patients (68.7%) in Group I were continent as compared with 21 of the 26 (80.7%) patients in Group II. The difference in the continence rates was mainly due to less use of electrocautery and harmonic scalpel at the bladder neck, sparing of seminal vesicle and preservation of the healthy urethra during dissection. Sharp dissection and less use of electrocautery and harmonic scalpel causes lesser damage to the nerves in the vicinity of the neurovascular bundle and also helps in better preservation of the external sphincter at the neck. In Group I, sixteen of the 26 patients were potent pre-operatively and four (50%) of them remained potent 3 months after LRP. In Group II, 20 of the 26 patients were potent pre-operatively, and 16 (80%) remained potent 3 months after LRP. The erectile function is better in Group II. The patient population in our study is small. Therefore, longer follow-up and studies including larger population of patients are required to evaluate the same.

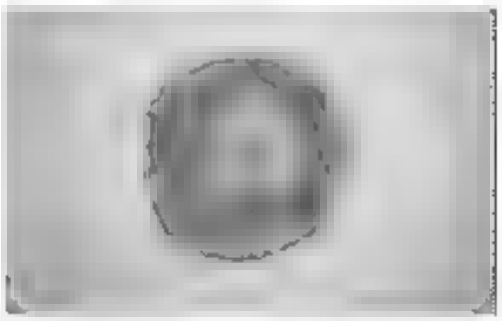

Fig. 3 : Post-operative specimen of the prostate

Conclusion

The benefit of SV preservation is to lower the probability of damage to the pelvic plexus and the blood supply to the cavernous bodies.[8] There are isolated, small, nonrandomized series of patients who underwent SV sparing and investigators have typically reported better than expected outcomes for urinary and erectile function[4,5,6].

Since its inception by Schlessler *et al*,[1,2] in the early 1990s, LRP has gained tremendous popularity and widespread implementation at specialized centers worldwide. LRP represents a technically demanding laparoscopic procedure but it can be performed systematically with standard techniques. Meanwhile, the constant effort to improve upon the technique to attain better results is evident in the literature coming in the world over. In the same context, our initial observation that the use of low-energy source at the bladder neck and the neurovascular bundle, sparing of seminal vesicle, and preservation of the healthy urethra during dissection is associated with better continence and potency is encouraging. Nevertheless, longer follow-up and more mature data are needed definitively to establish the role.

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Comparisons of Post Operative Recovery Pattern in Minimal Access vs Open Anterior Thoracic Spine Surgery.

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ABSTRACT

Reconstruction of anterior column of thoracic and thoracolumbar region for trauma, tumor or post infective spine with conventional thoracotomy or thoracophrenolumbotomy have additional iatrogenic trauma at the antero lateral chest wall and abdominal wall, may some time ends up with post thoracotomy syndrome. The minimal access anterior thoracic or thoracolumbar approach opens up the whole thoracolumbar junction to mid thoracic spine to perform all the procedure required for reconstruction of anterior column of spine like debridement, decompression, corpectomy and anterior fusion of motion segments. The thoracolumbar region is approached by partial detachment of diaphragm from thoracotomy.

We present the initial recovery pattern in 31 patients having trauma or tuberculosis of thoracic spine operated with open or minimal approach at our institute at B J Medical College and Civil Hospital, Ahmedabad. 22 men and 11 women with average age 32 yrs. were recorded in study. 17 patients were having traumatic spine injuries and 14 were having tuberculosis. The initial evaluation found early recovery, less morbidity, less blood loss, less postoperative pain and comparatively good lung compliance.

Key words Anterior reconstruction, Minimal access thoracic spine, Spine trauma, Spinal tuberculosis

Introduction

Posterior stabilization is gold standard for stable spinal column fractures and can be done for unstable fractures but anterior column reconstruction is primary principle of treatment. Same way debridement and reconstruction of diseased spinal column with tuberculosis is main stay for treatment of Kochs spine. The classical open thoracotomy and thoracophrenolumbotomy approach perfectly expose the thoracic and thoracic lumbar region. At the same time they also causes extensive additional trauma to the lateral chest wall and abdominal wall including the thoracic cage. Development of endoscopic technique has made it possible to approach anterior part of thoracic, lumbar and thoracolumbar spine using minimal invasive technique (Figure 1).[1,2] This complete or partial resection of vertebral body, mono segmental or multi segmental fusion, decompression of spinal canal, debridement of diseased vertebral body and reconstruction of anterior spinal column can be performed quite efficiently with some modification in surgical instruments with minimal access. Initially the endoscopic approach was used only for thoracic discectomy and anterior release of concave curves by minimal approach.

Figure 1 : Minimal invasive spine instruments with video assisted endoscope for better visualization

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Materials and Methods

This study is retrospective hospital based comparative analysis of minimal access anterior spinal approach with open thoracotomy approach, at the Department of Orthopedics, B.J Medical College and Civil hospital Ahmedabad India. The analysis included patient operated for mid thoracic to thoraco lumbar junction with unstable spinal fractures and tuberculosis of spine with minimal access from August 2007 to March 2009. We compared the early outcomes of the minimal access anterior thoracic surgeries with conventional open approach to evaluate the post operative recovery pattern and morbidity of approach (Figure 2). The procedure carried out were partial or complete resection of vertebral body to decompress the spinal canal and reconstruction with bone graft and cage, abscess drainage for tuberculosis spine debridement decompression and reconstruction of diseased vertebral body with bone graft and cage.

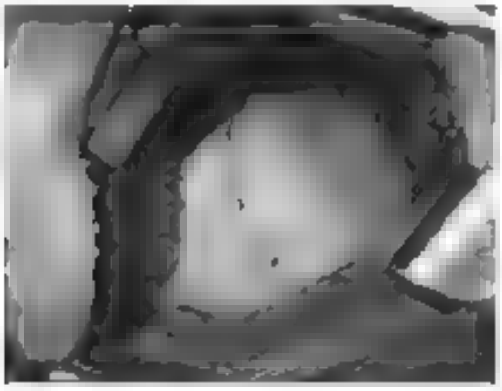

Figure 2 : Open thoracotomy approach showing rib resection and large exposure of thoracic cavity

The preoperative planning and preparation was same as conventional thoracotomy for each patient. All patients were operated before with posterior instrumentation with hearts hul rectangle or mossmiami pedicular system. General anesthesia was given to the patient with double lumen endotracheal tube and was positioned in right lateral position. After complete surgical isolation of incision site and level of body was marked with fluoroscopy and a retractor system (Synframe) was attached to the table. Incision of about 6 cm size was made at pre marked site over rib and segmental rib was resected. If the patient's thoracic profile is large then rib resection can be avoided and only through intercostals space thoracic cavity can be approached. Thorax was open and lung was retracted away from spine. With separate incision in anterior axillary line a 30 degree 10 mm thoracoscope was introduce for proper visualization (figure 3) [4, 5]

Figure 3 : Minimal access thoracotomy showing synframe retractor system to access the thoracic cavity through small incision

The self retaining Synframe was assembled to retract soft tissue. Lung and diaphragm were pushed with help of long blades of Synframe and the operative area was isolated from rest of thoracic structure. Segmental vessels were safely dissected and hemostasis was achieved with [illegible] (figure 4). The haemostatic clips were also used for this purpose [6]

Figure 4 : Linear view of the system showing direct approach to spine after retracting lung and other soft tissue

Modified longer version of instruments was used for endoscopic spine surgeries. Three patients were operated with conventional thoracoscopy approach. Four portals were used for abscess drainage and local debridement of the space with tuberculous spine. Anterior reconstruction was done with bone grafts or cage filled with tricortical bone graft. Chest drain was kept from the scope site portal so no extra incision was required for placing drain. Closer was done in layers as conventional thoracotomy.

Results

16 patients were included in the study. Posterior stabilization with mossmiam Pedicular system or hearts hul rectangle and sub laminar wires was done. All patients were operated in two stage surgeries having posterior fixation always first.

Table 1 Details of patients with different surgical approach

Pathology	Open approach	Minimal invasive	Total
Traumatic injuries	10	07	17
Tuberculosis	10	09	19
Total	20	16	36

Table 2 Comparison of parameters in patients operated with open vs minimal invasive approach in thoracic spine surgery

Parameters (n: 20)	Open approach (n- 16)	Minimal invasive
Mean surgery time (mins)	150	170
Mean Blood loss (ml)	800	350
Pain score by Visual analogue scale on 5th day	88.6	62.2
Pain score by Visual analogue scale on 15th day	73.4	36.8

Table 2 shows parameters taken for assessment for both the approaches Mean time taken for open surgery was 150 mins and blood loss was 800 ml while with minimal approach the time taken was 170 mins and Blood Loss was 350 ml average

Visual analogue score (VAS) was assessed on fifth day and 15th day of surgery for pain score[7] On fifth day of surgery patients operated with open approach had average pain score 88.6 and with minimal invasive approach was 62.2

On 15th day the VAS was again assessed and it was 73.4 and 36.8 for open and minimal invasive approach respectively

Discussion

Conventional open thoracotomy approach is very morbid approach and dissection of the intercostals space and resection of large rib segment will lead to loss of lung compliance, decreased vital capacity and increased morbidity We operated 16 patients with minimal access and in comparison we included 20 patients with open thoracotomy approach of total 36 included in study Out of 36 there were 22 male and 14 female patients 19 were having tuberculosis of spine and 17 patients were having traumatic injury in the territory from D-5 to D12 level We did not include patient with unstable injuries which required extensive dissection around diaphragm to approach L1 level with minimal access

Average time for open technique was 150 mins and for minimal invasive was 170 mins which in comparison is not counted very much Peri-operative blood loss with open technique was average 800 ml and with minimal access patient was average 350ml This shows the rate of blood loss is related to approaching the spine than main spinal procedure In spite of long surgical time approach related blood loss can be reduced by minimal invasive techniques quite efficiently

Post-operative pain was accessed by VAS score and found to be much better with minimal approach than open technique in first five days of surgery On 15th day the pain score was again evaluated which improved from 62.2 to 36.8. Open thoracotomy has pain score on 5th day 88.6 and on 15th day 73.4, this shows comparative morbidity in post operative recovery period

and with open technique there is quite longer than minimal invasive technique. The pulmonary function improved with minimal invasive approach than open technique after having all patients PFT done on 2nd and 7th day of surgery.[8]

All patients had gone for anterior decompression of cord by total or partial corpectomy and then reconstruction was carried out with mash cage filled with bone grafts. None was complemented a hemiply. The average incision size with minimal invasive was 6.5 cm. As per protocol all patients were sent for postoperative rehabilitation. the patient with minimal approach has started their rehabilitation on average 4th day and with open technique had started on 10th day because of pain and respiratory compromise. Figure 6 shows post operative x-rays of patient operated with minimal invasive second stage after posterior fixation with pedicle screw system. Reconstruction done with distractable cage filled with bone graft for restoration of anterior and middle column height and curvature of spine.

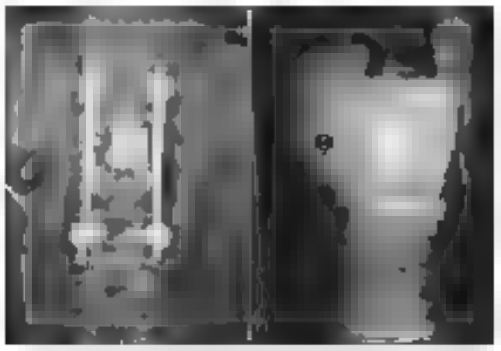

Figure 6 Post operative x-rays, after anterior surgery, AP and Lateral view showing anterior reconstruction with distractable cage.

Conclusion

In last two decades endoscopic procedure have become a undardized techniques for minimal invasive procedure including spine surgeries. With minimal access it has become possible to approach thoracic and thoraco lumbar region including retroperitoneal segment of the spine. With partial detachment of the diaphragm it has increased location of spectrum of the [illegible] anterior approach substantially, so that it include complete treatment of spinal fractures and diseased vertebral body with infection or tumor. The complication rate of this approach remain at same scale as that are known for open procedure with advantages in terms of the reduced access morbidity associated with minimal invasive technique.

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Left Molar Approach For Excision of Large Oral Cystic Swelling: Our Experience

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ABSTRACT

Molar approach of laryngoscopy and intubation technique is used for anticipated difficult intubation due to presence of any intraoral mass which anatomically obstructs laryngoscope or may rupture or bleed on touch. In such situation left molar approach with Macintosh blade along with optimal external laryngeal manipulation is easy, reliable and rewarding for endotracheal intubation. We report a case of large intra oral cystic swelling, admitted to Civil Hospital, Ahmedabad for excision. Laryngoscopy with left molar approach with Macintosh blade along with optimal laryngeal manipulation resulted into successful intubation for surgery.

Key words : Intraoral mass, laryngoscopy, left molar approach, Optima external laryngeal manipulation

Introduction

Securing & maintaining a patent airway for intraoral mass or swellings is a great challenge to the anesthesiologist. In such situation difficult laryngoscopy is encountered more often as intra oral mass encroach and physically occupy the oral cavity thus making glottic visualization, laryngoscopic maneuvering and endotracheal intubation difficult. This can be overcome by using left molar approach using Macintosh blade and optima external laryngeal manipulation (OELM).

We report a case of intraoral swelling, occupying the whole oral cavity in a 10 years old male child for excision. It was a case of difficult laryngoscopy and intubation. Hence left molar approach of laryngoscopy with Macintosh blade and optimal external laryngeal manipulation was used to provide a better glottic visualization.

Case report

A 10 year old male child with 30kg weight and 140cms height was asymptomatic before one year. The parents noticed a small cystic swelling on right side of anterior aspect of tongue. Initially, the swelling was small and gradually progressed to the present size. The patient had difficulty in eating & chewing for one month and was admitted at Civil Hospital, Ahmedabad for excision.

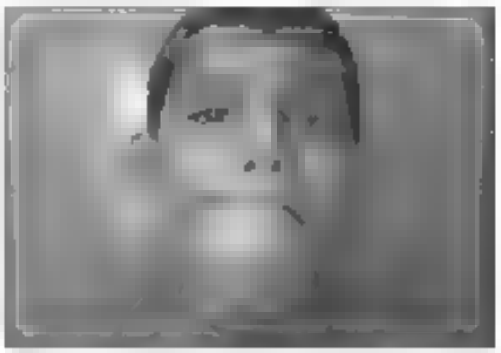

Figure 1 : Patient with large intra oral tumour

Pre-operative physical examination revealed normal vital parameters. Though he had difficulty in eating, the tongue, nail and conjunctiva were fairly pink. He had good mouth opening with normal teeth, no intra oral structure was visualized. All the investigations were within normal limit except USG tongue showed well defined cystic swelling of 43 x 37 mm size.

The patient was premedicated with inj. glycopyrrolate 2 mg i.v. Inj. ondansetrone 2 mg i.v. and Inj. rabeprazole 10 mg. i.v. As the patient was of pediatric age group and not co-operative for awake intubation, he was sedated with Inj. ketamine 50 mg i.v. and Inj. propofol 50 mg. After proper sedation, tongue was caught gently with Magill's forceps and brought outside to the right of the mouth. Conventional Macintosh English profile laryngoscope blade was introduced from the left molar approach to visualize glottis. As epiglottis and glottic opening were visualized with OELM tracheal intubation was successfully done with ETCUFF 5.5 mm ID with stylet after topical spray with 10% lignocaine. The left molar approach with OELM significantly improved

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laryngeal view from Grade 3 to Grade 1 (Cormack and Lehane Class fication).[1] B lateral artery was nicked and endotracheal tube was fixed Oral packing was done with wet roller pack Swelling was aspirated and then capsule was removed successfully

Discussion

Causes of difficult laryngoscopy are multifactorial, but obvious obstacles include maxillary structures such as prominent incisors and an increased volume of tongue remaining anterior to blade The molar approach of laryngoscopy is reported to improve glottic view in sporadic cases of difficult intubation A right molar approach for direct laryngoscopy has been recommended for patients with difficult airways [2] In these reports, straight laryngoscope blades were inserted from the right corner of the mouth at a point above the right molars The only exception is a report by Akdikmen,[3] who recommends insertion of an inflant-sized straight blade from the left corner of the mouth at a point posterior to the molar teeth for adult patients with difficult laryngoscopy The right-molar approach has the advantage that the bulging of tongue over the blade is prevented, the laryngeal view is framed by the laryngoscope and the right side of the patient's mouth A hockey stick-shaped stylet or assistant's finger is necessary to pull the right corner of the mouth laterally in the right-molar approach [2] Because this maneuver is essential to make room to manipulate the endotracheal tube, the laryngoscopist cannot bring blade fully to the right side of the mouth.

Figure 2 - Laryngoscopic view by left molar approach

The left molar approach is, on the other hand able to minimize the main undesirable effect of molar approach because the laryngoscopist can bring the blade fully to the left side of the mouth The only drawback of the left-molar approach is the bulging of the tongue over the blade which may obscure the view of the glottis In present case bulging of the tongue did not disturb the direct visualization of the glottis The line of view of the laryngoscopist inevitably deviates laterally from the midline in molar approaches. This deviation makes it difficult to align the tip of endotracheal tube with the aperture of the glottis

According to Dr Ken Yamamoto, Dr,Tsunehisa Tsubokawa et al[4], the glottic view in patients with difficult laryngoscopy improved if the Macintosh blade was inserted at a point above the left molars The Macintosh blade is widely accepted because it enables quick, atraumatic laryngoscopy and lower deviation of line from the ideal one than a MI or Miller blade Even using the Macintosh blade and an optimal sniffing position, however a direct line of view to the glottis could be prevented, resulting in difficult laryngoscopy. The molar approach reduces the distance from the patient's teeth to larynx and prevents intrusion of maxillary structures into the line of view In addition a molar approach avoids a large volume of the tongue remaining anterior to the blade, unlike the midline approach Optimal external laryngeal manipulation is reported to reduce the incidence of difficult laryngoscopy if using Macintosh blade from 9.3 to 5.9 %, 8 to 3 % or 11.4 to 0.00 %.[5] We confirmed that OELM effectively reduces incidence of difficult laryngoscopy (laryngeal view of grade 3 or grade 4) from 6.5 to 1.97% with molar approach using Macintosh blade. Despite popularity of predictive tests of difficult laryngoscopy such as the Mallampatti score Wilson risk sum score and prediction with Indirect Laryngoscopy they have been associated with unavoidable false positive & false negative if anesthesiologists encounter an unexpected difficult laryngoscopy the left-molar approach with OELM provides an easy and reliable option

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Toxoplasma Gonadii in Bone Marrow Aspiration

*R. N. Gonsai****, H. V. Oza***, Tarang Kadam**, Purvi Patel**, Neelam Mehta**

Introduction

Toxoplasma Gondii is a protozoan parasite of the phylum apicomplexa that has a world wide distribution in humans and in domestic and wild animals. Infection in immunocompetent person is generally asymptomatic or mild, but immunocompromised person may experience serious complication. Infection in utero may result in serious congenital infection with stillbirth.

In immunosuppressed especially cause with AIDS infections with *T. Gondii* may present with CNS involvement. Other possible clinical and pathological manifestation includes Pneumonitis, myocarditis, retinitis, pancreatitis or orchitis. In AIDS when CD4 count fall below 200/micro lit. opportunistic infections are seen.

Case Report

A 32 year male patient was admitted with he complains of fever with chills, abdominal pain, vomiting and dry cough since 7 days. The patient body weight was45 kg. There was no history of alcohol consumption or tobacco chewing or smoking. Patient was known case of H.I.V positive since 3 months. The patient had a past history of extra pulmonary TB in 2005 and was treated for 1.5 years.

Hemogram showed pancytopenia with normal RBC indices.

ESR – normal range

RBC – 2 million/cmm

WBC – 800 cells/cmm

Platelet – 30000 cells/cmm

Peripheral smear examination revealed reduced RBC mass with microcytic, hypochromic picture and moderate anisopoikilocytosis. Liver Function test and Renal Function test were normal. 8 units of Blood & 1 unit of platelet were transfused. Post transfusion Hemoglobin increased to 10.8 gm% but leucopenia (2000 cells) & thrombocytopenia (15,000) persisted. On USG abdomen liver was moderately enlarged, spleen was moderately enlarged, multiple tiny hypoechoic splenic microabscess/ splenic infiltration, multiple enlarged pre & paraaortic & peripheral lymphnodes were found.

Chest x-ray was normal. Due to persistent pancytopenia bone marrow aspiration was advised which showed few myeloid & erythroid precursors and mildly increased plasma cells were seen. Many scattered extracellular trophozoite form of *toxoplasma gondii* were seen. The bone marrow findings were suggestive of normocytic anemia with pancytopenia with presence of trophozoite of *toxoplasma gondii*.

Later on CSF examination was done which showed *Cryptococcal neoformans*. Stool examination also showed multiple parasites. Finally a case was diagnosed as AIDS with multiple parasitosis.

Discussion

AIDS is a multisystem disorder affecting immunity of body. As bodys ability to fight against infection is reduced CD4 count is reduced. This leads to increased chance of opportunistic infections. In the present case a known patient of HIV positive for last 3 months developed *T.gondii* and *C.neoformans* opportunistic infections. Diagnosis of toxoplasmosis may be established by examination of tissue, blood or body fluids. Demonstration of tachyzoites or tissue cyst is definitive but may prove difficult to demonstrate in H & E stain system. Fluorescent or immune-peroxidase stain if available is useful. Isolation of organism from blood or body fluid is evidence for acute infection where as recovery from tissue may reflect chronic infection. In smear tachyzoites are crescent shaped or ovoid measuring approx. 4x7 micro meter, cyst measure up to 50 micrometer and is usually spherical except in muscle fiber where they appear elongated. Serology remains the primary approach to establish a diagnosis of toxoplasmosis. The Sabin Feldman Dye test & IFA are standard tests. Antibody appears in 1 to 2 week and peaks at 6 to 8 weeks.

References for Further reading

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Student's Activities & Achievements

Various sports events like cricket, table tennis, chess, and badminton have been successfully organized by the students of B. J. Medical College. For each of these events, an organizing committee is formed and the details are displayed on the notice board. The formats of these tournaments are interesting to suit their study hours and sport activities. The participants play various levels of game and consequently follow up to semi-finals and finals. The winners in each category are awarded in the function organized by students. It's a great fun with building team spirit among the students.

- **Table Tennis Championship'09** was organized between 18 – 20th March 2009 by Hardik Jadav, Jay Patel, Sachin Dabhi. The winners were Dr. Snehal, Arnav, Chauhan, Ashish & Vidhan, Mruga & Gamit in various category.

- **Chess tournament** was organized by **Kumar Mehta (III/III), Ketul Puj (III I), Dhruva Soni (III I)**, Kruti Patel (III) from 25th of March to 5th April 2009. The format was according to Swiss League. A total of 34 students, interns and residents participated. According to the format, each player had played 6 matches. It was a great experience with fun. The finals between Dhaval Shah and Nakul Solegaon was a marathon match, lasted for 5 hours and was won by Dhaval Shah.

- **'Fun with Cricket'** a new concept, the shortest, funniest and interesting and exciting ever cricket format of 6 over match, 6 players (2 girls and 4 boys) was organized from 20th to 27th March 2009. 6 over match, 6 players (2 girls and 4 boys), in which boys had to bat with wrong hand. Double runs were given to girls. There were various other interesting rules also. It was a big success with more than 50 teams from B.J. Medical College, Dental, Physiotherapy and N.H.L Medical College. The winning teams and performers were awarded prizes on 1st April 2009. It was indeed pleasurable to see young budding doctors taking time out of their busy schedules to participate in the event with full zeal. The various winning teams and performers were awarded prizes on 1ST April 2009.

- First year students Parth Londhi, Manav Trivedi, Kunal Desai got 3rd prize in "**Interstate Physiology Quiz'08**" at P. S. Medical College, Karamsad.

- Resident doctors Kapil Virpariya, Ravish Raval & Piyush Joshi won 2nd prize in Medical Quiz at APICON '09 held at Ghaziabad.

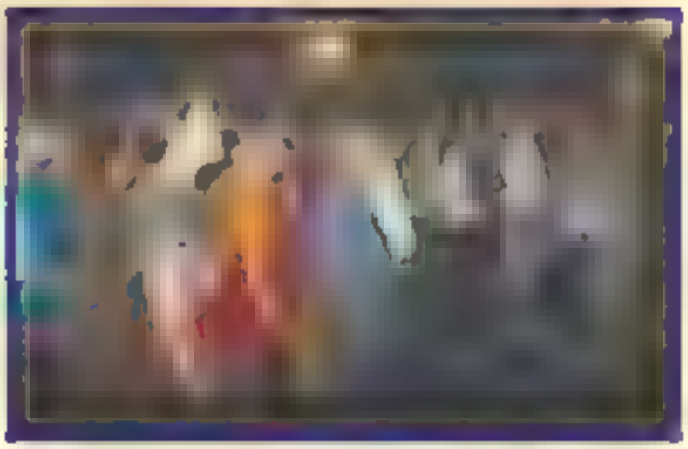
- To pay tribute to the bomb blast victims in a special way "***ULTIMA CONCERT***" was organized by our interns known as '***Infants***' on 21st March 2009. About 1200 youth from all over the city joined to support the traumatic cause. A blood donation camp was also organized during the show and 25 bottles of blood were collected.

Inauguration Of MCI platinum Jubilee celebration seminar by Hon'able Chief Minister

Inauguration of 'Cytacon 2008'

Inauguration of 'The Candle Lighting Ceremony & the College Day' by Hon'able Health Minister Shri Jay Narayans Vyas at Nursing school.

Shraddhanjali to bomb blast victims at college auditorium



A tribute to bomb blast victims at AATMA concert

Renovated reading room for UG students in library

Computer Lab in the library

Civil Hospital, Ahmedabad

O.P.D. building at Civil Hospital, Ahmedabad

Donor Screening & Examination : Blood Bank

Receiving Sample from wards and processing : [illegible]

Air-Condition comfort of Special Rooms (G-6 Ward)

Nursing Station at recently started G-6 Special Ward

Ready to serve : Nursing Staff at Special Room Nursing Counter

Paediatric Ward : Specially designed and equipped for the needs of children

Ultra modern Blood Bank with State-of-The Art Equipments

Dean awarding prize for cricket series

Students playing carrom and table tennis at Gymkhana

Dr. R. K. Dikshit awarding prize for cricket series

Recently renovated badminton court at the college

Musical band of interns - *Indents*

Blood donation camp organized by students

Instructions to Contributors

Manuscripts

- Manuscript must be submitted in two hard copies and CD (MS word 2007 format) along with the statement signed by the authors regarding the originality of the article. Soft copy of the manuscript may be mailed to the editors.
- The text must be printed in double spaced, on one side of the A4 size paper with sufficient margins in Arial font, size 12.
- Text should have title page with full name of the author(s), designation and affiliations. The corresponding author's address, e-mail, telephone number should be mentioned.
- PG students should submit their articles through the Professor and Head of the department.
- A structured abstract for the research articles and unstructured for the review article, not exceeding 200 words should be provided.
- All full length research articles should follow IMRAD pattern. The length for research article should not exceed 3200 words, references 25, and tables/figures 4.
- The [illegible] short communications and case reports should not exceed 1200 words, references 10, and tables/figures 2.
- The references should follow Vancouver style and be cited in the text by superscripted number and numbered in the order in which they appear.
- Table(s) figures referred in the text should be typed on separate page, be numbered in roman and mentioned with a brief title.
- Figures/ Photographs should be glossy, clear and submitted separately on CD with JPEG format. Each of them should be numbered, referred in the text and legends should be typed on separate page. On the back of each print mention the figure number, name of the article and authors. Maximum two photographs can be submitted with each article. Colour photographs will be printed at the author's expense.

Other Information

Scientific activities should include concise information on the conferences and workshops organized by department, [illegible] research projects undertaken, poster/ paper presentation, name of conferences (for the published papers). However it should not exceed more than one page.

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* HEALTH EVENTS' CALENDER *

JANUARY	FEBRUARY	MARCH
12 National Youth Day	28 National Science Day	8 International Women's Day
15 - IMA Community service Day		21 - World Forestry Day
20 UNICEF Day		21 Day for Elimination of Racial Discrimination
30 - Anti Leprosy Day		22 World Day for Water
		24 - World T B Day
		31 Measles immunization Day

APRIL	MAY	JUNE
7 World Health Day	1 World Labour Day	5 World Environment Day
1 - International Hemophilia Day	7 - World Asthma day	1-7 - Cleanliness Week
22 - World Heritage Earth Day	8 World Red Cross Day	14 World Blood Donor Day
	10 - International family day	26 - Anti drug abuse day
	38 International Women's Health Day	
	31 - World Anti Tobacco Day	

JULY	AUGUST	SEPTEMBER
1 - Doctors Day	1-8- Breast Feeding Week	1-7 Nutrition Week
1-7 - Mission Week	6 - Hiroshima Nuclear Hazard Day	8 World Literacy Day
11 World Population Day	25 Aug-10 Sep Eye Care Fortnight	10 Occupational Health Day
		15 World Peace Day
		24 World Heart Day

OCTOBER	NOVEMBER	DECEMBER
1 - World Anti Terror Day	9 - World Immunization Day	1 Anti AIDS Day
1 - National Voluntary Blood Donation Day	14 - Universal Children's Day	3 - World Handicap Day
9 Anti Drug Addiction Day	14 Diabetes Day	10 Human Right Day
1-10 Mental Health Week	14-20 Newborn Care Week	17 World Energy Saving Day
10 World Mental Health Day	17 National epilepsy day	
16 World Food Day	25 International Women's safety day	
30 - Osteoporosis Day		
31 Anti Natural Disaster Day		

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